



Bloomsburg State College



Graduate Catalogue

1982-83

**Statement of Non-discrimination
Policy**

Bloomsburg State College is committed to providing equal educational and employment opportunity for all persons without regard to race, color, religion, sex, age, national origin, ancestry, life style, affectional or sexual preference, handicap, status as a veteran, or union membership. Additionally, the College is committed to Affirmative Action and will take positive steps to provide such educational and employment opportunities. This policy is placed in this document according to appropriate state and federal laws. Please direct equal opportunity inquiries to:

Affirmative Action Officer, Carver Hall, 389-2523

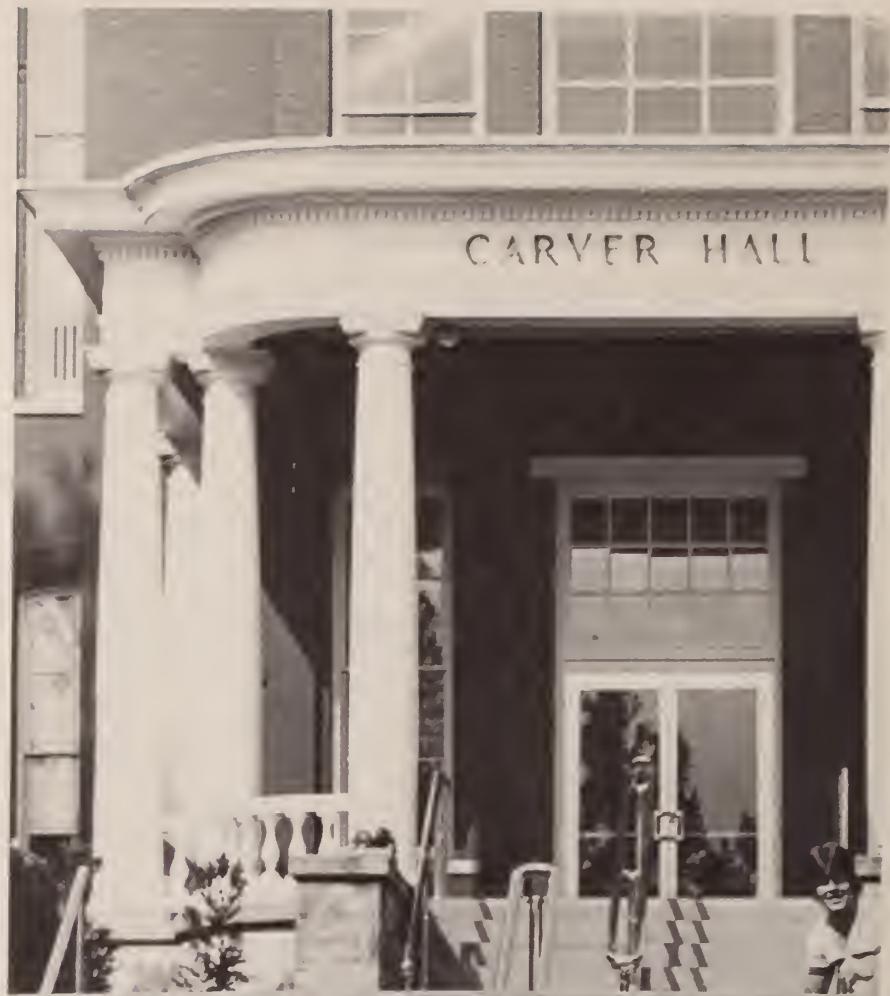
BLOOMSBURG STATE COLLEGE



GRADUATE CATALOGUE

1982-83

(prepared June 1, 1982)



CARVER HALL

BLOOMSBURG
STATE COLLEGE



ADMINISTRATIVE PERSONNEL

1981-1982

JAMES H. McCORMICK *President*
 B.S. in Ed., Indiana University of Pennsylvania; M.Ed., Ed.D., University of Pittsburgh
 (September 1, 1973).

LARRY W. JONES *Vice President for Academic Affairs*
 B.S., M.S., North Dakota State University; Ed.D., University of Oregon (1981).

CHARLES H. CARLSON *Dean, School of Graduate Studies*
 B.A., San Jose State University; M.A., Ed.D., Columbia University (1959).

GRADUATE COUNCIL

1981-82

CHARLES H. CARLSON *Dean, School of Graduate Studies*

HAROLD J. BAILEY, Professor *Mathematics*
 B.S., Albright College; M.Ed., Ph.D., The Pennsylvania State University (1969).

JAMES E. COLE, Professor *Chairperson, Biological and Allied Health Sciences*
 B.A., M.A., Western Michigan University; Ph.D., Illinois State University (1968).

G. ALFRED FORSYTH *Dean, School of Arts and Sciences*
 B.A., Dickinson College; M.S., North Carolina State University, Ph.D., Purdue
 University (1978).

NANCY G. GILGANNON, Associate Professor *Educational Studies and Services*
 B.S., Bloomsburg State College; M.S., Marywood College; D.Ed. The Pennsylvania
 State University (1976).

ANDREW J. KARPINSKI, Professor *Chairperson, Special Education*
 B.S., M.Ed., Ed.D., The Pennsylvania State University (1967).

MARGARET J. LONG, Associate Professor *Business Education/ Office Administration*
 B.S., Indiana State College; M.Ed., The Pennsylvania State University, Ph.D.,
 University of Pittsburgh (1961).

HOWARD K. MACAULEY, JR., *Dean, School of Professional Studies*
 A.B., Bucknell University; M.A., Stanford University; M.Ed., Temple University; Ph.D.,
 University of Pennsylvania (1967).

A. J. McDONNELL, JR., Associate Professor *Chairperson, Secondary Education*
 B.A., M.Ed., The Pennsylvania State University (1962).

LOUIS V. MINGRONE, Professor *Biological and Allied Health Sciences*
 B.S., Slippery Rock State College; M.S., Ohio University; Ph.D., Washington State
 University (1968).

DANIEL C. PANTALEO *Dean, School of Extended Programs*
 B.S., Manhattan College; Ph.D., Emory University (1977).

EMORY W. RARIG *Dean, School of Business*
 B.S., Bloomsburg State College; M.A., Ed.D., Columbia University (1968).

LOUIS F. THOMPSON, Professor *Chairperson, English*
 A.B., Columbia College; M.A., Ph.D., Lehigh University (1963).

LYNN A. WATSON, Professor *Elementary and Early Childhood Education*
 B.S., Shippensburg State College; M.Ed., Ed.D., The Pennsylvania State University
 (1966).

MARGARET S. WEBBER, Professor *Special Education*
 B.S., State University of New York at Oneonta; M.S., Ed.D., Temple University (1968).

ROBERT J. NOVELLI, Graduate Assistant
B.S., Bloomsburg State College

Communication

SUSAN L. WATERS, Graduate Assistant
B.S.Ed., Bloomsburg State College

Communication

TENTATIVE GRADUATE CALENDAR 1982-1983 ACADEMIC YEAR

1982—FALL SEMESTER

August 27—	Final date of graduate registration for Fall Semester
August 30—	Classes begin for Fall Semester
Septemebr 6—	No Classes (Labor Day)
October 1—	Final date for submitting Application for December graduation
November 24—	Thanksgiving recess begins at 1:50 p.m.
November 29—	Thanksgiving recess ends—classes resume (8:00 a.m.)
December 6—	Final date for completion of Master's Thesis, Departmental Paper, and/or Comprehensive Examinations
December 18—	End of Fall Semester
December 19—	Commencement

1983—SPRING SEMESTER

January 14—	Final date of graduate registration for Spring Semester
January 17—	Classes begin for Spring Semester
March 1—	Final date for submitting Application for May graduation
March 7—	Spring recess begins at 8:00 a.m.
March 14—	Spring recess ends—classes resume at 8:00 a.m.
April 4—	Easter recess—no day classes. Evening classes meet
May 2—	Final date for completion of Master's Thesis, Departmental Paper, and/or Comprehensive Examinations
May 14—	End of Spring Semester
May 15—	Commencement

1. GENERAL INFORMATION

1.1 PURPOSE

Graduate work at Bloomsburg State College is planned to provide opportunity for study leading to masters' degrees and for non-degree graduate level study.

The latter includes opportunity for teachers to take courses for self-improvement and for certification credit. College graduates other than teachers are invited also to study courses for self-improvement without a degree.

1.2 LOCATION

The Town of Bloomsburg, county seat of Columbia County, is an industrial, trading, and residential community of 11,000 located on Route 11, 80 miles north of Harrisburg. It is within two miles of two interchanges of Interstate 80.

Bloomsburg is served by the Greyhound and Continental Trailways bus lines. Commercial airports are accessible at Wilkes-Barre/Scranton on Route 81, and at Williamsport; each is about an hour's drive from Bloomsburg.

1.3 ACCREDITATION

Bloomsburg State College is accredited by the National Council for Accreditation of Teacher Education and by the Middle States Association of Colleges and Secondary Schools. Its graduate programs have been approved by the Pennsylvania State Department of Education.

1.4 LIBRARY

Andruss Library, named in honor of Dr. Harvey A. Andruss, President of the College from 1939 to 1969, was completed in August, 1966. It is located between Hartline Center for the Sciences and Bakeless Center for the Humanities. The Library houses more than 300,000 bound volumes and 670,000 microtexts. The building has accommodations for 500 readers, a projection room, a Learning Resources Center and areas housing a special Juvenile Collection, a Documents Collection, and a Microforms Collection. The building is air-conditioned.

The library provides books and other materials supporting courses, research, and personal enrichment for students and faculty. Included in the overall collection are a Juvenile Collection of 10,000 volumes and 4,000 are bound periodicals; and files of pamphlets and mounted pictures. More than 830 periodicals and over 20 newspapers are received on a regular basis. The Learning Resources Center includes films, filmstrips, recordings, slides, transparencies, and other multi- media materials.

1.5 LIVING ACCOMMODATIONS

Residence halls are open to graduate students during summer terms. Requests for information concerning residence hall accommodations may be secured from the Director of Housing. Meals are available to graduate students in Scranton Commons.

1.6 FEES AND REFUNDS

(Fees are subject to change without notice)

Application Fee

Payable upon application for admission to graduate courses - not refundable - \$10.00.

Basic Fee:

Residents of Pennsylvania - per semester hour - \$82.00.

Out-of-State Students - per semester hour - \$82.00.

Late Registration Fee—\$10.00

Activities Fee (optional)

Summer Term - Six weeks session - \$9.00, three week session - \$4.50.

Student Community Building Fee

1 - 4 semester hours - \$2.50, 5 - 8 semester hours - \$5.00, 9 or more semester hours - \$10.00.

Graduation and Diploma Fee

(Does not include rental fee for academic costume) - \$10.00.

Refunds for basic fees will be based on the following schedule if applicable after the first full class day.

1st through 2nd wk.	3rd wk.	4th wk.	5th wk.	after 5th wk.
80%	70%	60%	50%	No Refund

1.7 FINANCIAL ASSISTANCE

Normally, only full-time students are eligible to apply for financial assistance. Assistance is available to graduate students in the form of Graduate Assistantships, Federal Fellowships in selected areas, and the Pennsylvania Higher Education Assistance Agency Loan Programs. Inquiries should be addressed to the Director of Financial Aid or the Dean of Graduate Studies.

1.8 PLACEMENT

Graduate students are eligible to use the services of the Placement Office after they have been accepted as candidates for a Master's degree.

1.9 TRANSCRIPTS

Graduate transcripts must be requested through the Office of Graduate Studies either by letter or by completing the transcript request form available in the Office of Graduate Studies. The first transcript request is free; subsequent requests are \$1.00 per copy.

1.10 AUDITING GRADUATE COURSES

Individuals who complete the regular application procedure may choose to audit a graduate course for purposes of self-improvement. No tests or class discussion are required for auditing a graduate course. However, the approval of the Graduate Dean is required. Also, full fee payment is required. (See Section 1.6 Fees and Refunds.) Upon completion of the graduate course, a grade of "V" is recorded on the transcript.



2. ACADEMIC POLICIES

2.01 STUDENT RESPONSIBILITY

It is the student's responsibility to satisfy the requirements for graduation in his/her curriculum and to observe the academic regulations of the Graduate School. Although the adviser and the staff of the Graduate School stand ready to aid the student in his/her decision making, the final responsibility rests with the student.

2.02 DEGREES

The Master of Education degree was established in 1960. Its programs are planned for teachers in service.

The first Master of Arts program (history) was established in 1968 and the first Master of Science program (biology) in 1971.

A program to lead to the professional degree Master of Business Administration (MBA) was approved to be instituted in 1976.

The purpose of programs for the professional degree, Master of Education, is to enhance the competence of teachers. The purpose of a Master of Arts program is to advance the student's scholarship in an academic discipline, and that of a Master of Science program is to develop mature scholarship and competence related primarily to application.

2.03 TIME LIMIT

All requirements for a master's degree, including any courses accepted by transfer, must be completed within six calendar years. This period may be extended for sufficient reason. Written application for extension must be made to the Dean of Graduate Studies prior to the end of the six-year period.

2.04 SCHEDULE OF CLASSES

Graduate classes taught in the regular academic year are usually scheduled in late afternoons, evenings and Saturdays in order to provide opportunity for teachers and individuals engaged in other full-time occupations to further their education. Graduate courses are offered in the summer sessions in regular daytime classes.

2.05 ADMISSION TO GRADUATE COURSES

Admission to graduate courses is granted upon: the filing of a formal application for admission, submitting of credentials which certify a baccalaureate degree from an accredited college with a quality point average of 2.0 or higher (A = 4), and payment of a non-refundable application fee of \$10.

Admission to graduate courses does not bind the college to admit the student to candidacy for a master's degree. The regulations governing admission to candidacy are stated in Section 2.22.

A temporary permit to register for an off-campus course as an adjunct student without formal admission to graduate courses may be granted to a college graduate by the Dean of Graduate Studies.

2.06 CATEGORIES OF GRADUATE STUDENTS

An individual who has satisfied the requirements for Admission to graduate courses is classified in one of five categories as follows:

CATEGORY I (510) NON-DEGREE

Category 510 comprises students who do not express an intention to become candidates for a master's degree in one of the programs for which a degree or certificate is authorized, or who have been transferred to this category from other categories as stipulated herein.

Students in Category 510 may apply for transfer to Category 530 or Category 540. Not more than 12 semester hours taken as a student in Category 510 may be applied toward a Master's degree unless a special dispensation is granted by the Dean of Graduate Studies.

A student may choose to remain indefinitely in Category 510 (for example, a student interested only in certification credit).

CATEGORY II (520)

This category comprises graduate students who in their application for admission indicated an intention to pursue a master's degree program but whose undergraduate record showed a quality point average lower than 2.25. If a student in this category makes an average of 3.0 or higher in the first six to nine semester hours of graduate study at Bloomsburg State College, he/she is eligible for transfer to Categories 530 or 540; otherwise, the student is transferred to Category 510 after nine semester hours have been completed.

CATEGORY III (530)

Category 530 comprises individuals other than those in Category 520 who indicated an intention to pursue an existing master's degree program and who have not yet been certified as clear of undergraduate deficiencies. Transfer to Category 540 is automatic when the adviser certifies to the Graduate Dean that there are no undergraduate deficiencies to be made up for the chosen program, or when previously identified deficiencies have been successfully

CATEGORY IV (540)

This category comprises graduate students who have no undergraduate deficiencies for the master's degree programs which they are pursuing. A student must be in Category 540 in order to be eligible to apply for Admission to Candidacy for a master's degree. A student in Category 540 who has not attained Admission to Candidacy after completing 12 semester hours of graduate work is transferred to Category 510 unless an extension of time has been granted by the Dean of Graduate Studies. The request for extension of time must certify that the delay was the result of circumstances beyond the control of the student and must be endorsed by the student's adviser.

CATEGORY V (550)

This category comprises students who have been admitted to candidacy for a master's degree. An individual in Category 550 is transferred to Category 510 if his cumulative quality point average falls below 3.0, or if he has not completed his program within the time limit (see Section 2.03).

2.07 ADVISEMENT OF GRADUATE STUDENTS

Graduate students in Categories 520, 530, 540 and 550, and in the Supervisory Certificate Program, are assigned to advisers. The duties of the adviser of a graduate student are: to serve as consultant in the planning of the student's program and in his/her choice of courses; to certify approval of the course as part of the student's degree program; to endorse the student's application for degree candidacy; to arrange for a comprehensive examination if it is required by the program.

The adviser is appointed by the Dean of Graduate Studies upon recommendation of the department of the proposed specialization.

An interview with the adviser is required prior to first registration for graduate courses and prior to each subsequent registration.

Students in Category 510 are not assigned to advisers. They submit their registration materials directly to the Office of the Dean of Graduate Studies. They may regard the Dean of Graduate Studies as an adviser in case assistance is needed in choosing courses or in interpreting academic regulations.

2.08 CREDIT

Credit is measured in semester hours at the rate of one semester hour for fifteen hours of lecture-discussion work plus final examination.

2.09 SEMESTER HOUR LOAD

During a period in which he/she is engaged in full-time employment, an individual may enroll in a maximum of six semester hours in a given semester. Overloads are permitted only upon approval by the Dean of Graduate Studies. Approval is given only in the most unusual circumstances.

The maximum load for a full-time student in a semester is twelve semester hours.

In terms other than regular semesters, the maximum is determined at the rate of one semester hour per week of full-time course work.

The normal load of a graduate assistant on full stipend is six to nine semester hours; that of a graduate assistant on half stipend is nine to twelve semester hours. No overload is permitted.

2.10 NUMBERING OF COURSES

Courses numbered 500 or higher are open only to graduate students. Courses numbered below 500 and listed in this bulletin are open also to advanced undergraduates. The number of credits in such courses which may be applied to a degree is limited to twelve semester hours. It is understood that graduate students enrolled in these courses will exhibit work of graduate calibre in their independent study and their papers.

2.11 TRANSFER OF CREDIT

A maximum of six semester hours in graduate courses taken in other approved colleges may be credited toward a master's degree. The transferred courses must have been taken in residence; they must cover content which is required in the student's program or recommended by the adviser for elective credit; they must have grades of B or higher. In case a course has been taken on a branch campus of a university, it will be construed as a residence course if full-time graduate students are accommodated to take a degree program on that campus.

2.12 REGISTRATION FOR GRADUATE COURSES

Students register for graduate courses through the Office of the Dean of Graduate Studies.

2.13 ATTENDANCE AT CLASSES

A student who is absent from a graduate class for a reason which can be verified as urgent is entitled to a reasonable amount of assistance from the professor in making up the work which was missed. This includes permission to make up an examination

given the class during his/her absence and the late submitting of assignments that were due during the period of absence. It is the student's responsibility to provide the verification if requested when applying for the privilege of making up the work missed.

2.14 WITHDRAWALS

A graduate student may withdraw from a course by applying to the Dean of Graduate Studies. If withdrawal is requested prior to the date established by the registrar as the midpoint of the semester, the grade in the course is W. If withdrawal is initiated later, the grade is W if the student is currently passing the course; otherwise the grade is E.

The official date of withdrawal used in computing a grade and in determining a refund is the date of the latest class meeting prior to the filing of the withdrawal request in the Office of the Dean of Graduate Studies.

2.15 EXAMINATIONS

The Miller Analogies Test is required of each student before he may be admitted to candidacy for a Master's degree. (Candidates for the Master of Business Administration degree must take the Graduate Management Admissions Test). The time and place of the examination may be learned upon inquiry to the Dean of Graduate Studies.

A comprehensive examination in the specialization may be set by the department as a degree requirement.

An examination in defense of a Master's Thesis is usually required of students who choose to write a thesis.

2.16 MASTER'S THESIS

If a master's thesis is included in the student's program, a committee is appointed by the Dean of Graduate Studies from individuals nominated by the student's adviser. The committee is responsible for guiding the study, certifying approval of a written report both in form and content, arranging for the defense, certifying satisfactory completion of the thesis and determining the grade.

Three bound copies of the thesis must be filed with the Dean of Graduate Studies.

The student is responsible for following all of the thesis procedures specified in a special bulletin which may be obtained in the Graduate Office.

Where the requirements for a concentration for the Master of Education degree include a departmental paper, such a paper is interpreted as one which grows out of a course and therefore does not require special registration nor carry its own credit. Completion of a departmental paper must be certified by the adviser as a part of the application for graduation.

2.17 GRADUATE COURSES IN THE SENIOR YEAR

A senior who is registering for the semester (or summer term) in which he/she will complete the requirements for a baccalaureate degree and who requires less than fifteen semester hours (six semester hours in case of a six week summer term or twelve semester hours in case of two consecutive six week summer terms) may supplement the requisite undergraduate courses with graduate courses provided the total of undergraduate and graduate courses does not exceed the normal loads as stated herein.

The recommendation of the student's undergraduate adviser, including his/her certification that the undergraduate courses listed will complete the baccalaureate requirements, must accompany the application for admission to graduate courses. The student must pay the graduate application fee.

The graduate credit earned in this term is held in reserve until the baccalaureate degree has been completed.

2.18 GRADUATE ASSISTANTSHIPS

A limited number of graduate assistanships are available for full-time students in the regular academic year. Application is made to the department in which the service would be performed.

The maximum amount which may be earned by a graduate assistant in one year is \$2,705. Appointments are made either for this maximum sum or one-half of this sum. The graduate assistant on full stipend is responsible for 10 to 20 hours per week of service. The graduate assistant on half stipend is responsible for 5 to 10 hours per week of service.

2.19 GRADES AND AVERAGES

Grades given for graduate courses are:

A— Distinguished; scholarly work which exhibits independence and intellectual maturity. (4 quality points)

B— Good. (3 quality points)

C— Fair; acceptable toward a master's degree program within limits. (2 quality points)

D— Not acceptable in a degree program (1 quality point)

E— Failing. (0 quality points)

I— Incomplete: work must be completed within four months unless the period is extended by the Dean of Graduate Studies for adequate reason. If the work is not made up, the grade is changed to N and the student is denied further opportunity to complete the work.

RI— Removal of Incomplete grade.

N— No grade; no credit.

R— Research in Progress.

W— Withdrawn with approval of the Dean. The regulations governing the grade of W are described in the paragraph on withdrawal.

V— Audit.

CR— Course repeated.

The Cumulative Quality Point Average (QPA) is computed by the following process: (1) Multiply the number of quality point for each grade of A, B, C, D, or E in a graduate course taken at the College by the number of semester hours for the courses; (2) add these products; (3) divide by the sum of the semester hours for all grades which entered the computation. When a course has been repeated, only the last entry is used.

2.20 REPEATING COURSES

No course may be repeated more than once. (See section 2.19 for effect on the quality point average.)

2.21 ACADEMIC STANDARDS

Each program that leads to a Master's degree requires a minimum of thirty semester hours of graduate credit. Credit for courses with grades below C is not accepted toward the requirements for the degree.

The student's cumulative quality point average for graduation must be a 3.0 or higher.

2.22 ADMISSION TO CANDIDACY FOR A MASTER'S DEGREE

Admission to Candidacy for a Master's degree is subject to the following conditions:

- (1) The student must be in Category 540 (see Section 2.06).
- (2) Transcripts of all undergraduate and previous graduate study must be on file in the Office of the Dean of Graduate Studies.
- (3) The Graduate Qualifying Test (Miller Analogies Test) must have been taken with a satisfactory score. (Master of Business Administration students must have successfully completed the Graduate Management Admissions Test.)
- (4) The student must file an application for Admission to Candidacy with the Dean of Graduate Studies after nine semester hours (or immediately after 12 semester hours) of the proposed program. Under certain circumstances the dean may approve an extension of time. The application must be endorsed by the student's adviser; the endorsement presumes that the adviser has had adequate opportunity to formulate judgment about the student's ability, and recommends candidacy.
- (5) A student who is applying for candidacy for the Master of Education degree must have filed with the Dean of Graduate Study evidence of possession of a valid teaching certificate.

In case enrollment in a curriculum or in certain required courses thereof is restricted due to limited capacity, and a priority for admission has been established, the adviser may inform an advisee who is making satisfactory progress that endorsement of his application for Admission to Candidacy is being deferred until space can be assured. It is the responsibility of the student to inform the Dean of Graduate Studies of the reason for the delay in filing the application.

2.23 THE MASTER OF EDUCATION DEGREE

Program of Courses for the Degree

Master of Education

Two basic courses in professional education are required as follows:

60.501 MAJOR PHILOSOPHIES OF EDUCATION	3 sem. hrs.
60.591 FOUNDATIONS OF EDUCATIONAL RESEARCH	3 sem. hrs.
The candidate may elect to take one additional basic education course to be chosen with the approval of his/her adviser from the following:	
48.576 THEORIES OF HUMAN LEARNING	3 sem. hrs.
60.511 CURRICULUM AND INSTRUCTIONAL DEVELOPMENT	3 sem. hrs.
60.550 PROBLEMS IN GUIDANCE AND COUNSELING	3 sem. hrs.
60.561 MEASUREMENT AND EVALUATION IN THE SECONDARY SCHOOL	3 sem. hrs.
63.546 READINGS IN THE CONTENT AREAS	3 sem. hrs.
70.517 EDUCATION OF THE GIFTED CHILD	3 sem. hrs.

In addition to the above basic courses in education the candidate must complete a specialization of twenty-four or twenty-one semester hours so as to make the total credit at least thirty semester hours.

The Areas for Specialization are:

Biology	Elementary Education	Reading
Business Education	Mathematics	Social Studies (Hist or Geog)
Chemistry	Physical Science	Special Education
Earth Science	Physics	

The requirements for each area of specialization are stated in the appropriate section of the chapter on course descriptions

NOTE: Policies and programs may be revised during the academic year. It is the responsibility of the student to contact the Office of Graduate Studies to insure that the statements and procedures included in this Bulletin are currently applicable.

2.24 THE MASTER OF ARTS, MASTER OF BUSINESS ADMINISTRATION AND MASTER OF SCIENCE DEGREES

The Master of Arts degree is offered in Art Studio, Art History, and Communication.

The Master of Business Administration degree is offered in Business Administration.

The Master of Science degree is offered in Biology, Communication Disorders (Audiology, Speech Pathology and Education of the Hearing Impaired), Early Childhood Education, and Exceptional Persons.

The requirements for each major are described in the corresponding department's section of course descriptions.

For Admission to Candidacy for the M.A., M.B.A. and M.S. degrees, see Section 2.22.

2.25 SUPERVISORY CERTIFICATE PROGRAM

The objectives of the Supervisory Certification Program are related to the duties generally performed by first line supervisors, department chairpersons, coordinators, and directors of programs. The program is designed to develop supervisors who will be able to provide instructional leadership who will be able to work effectively with professional and non-professional in directing the activities of a given field (See Secondary Education section of this Bulletin).

Programs leading to certification are offered in the following areas:

Supervisor Communication	Supervisor School Health Services
Supervisor Early Childhood	Supervisor Science
Supervisor Elementary Education	Supervisor Social Studies
Supervisor Foreign Languages	Supervisor Special Education
Supervisor Mathematics	<i>*This is a separate Supervisory Certification Program</i>
Supervisor Reading*	

2.26 MASTER'S DEGREE EQUIVALENCE CERTIFICATE

The Commonwealth of Pennsylvania makes available a Master's Degree Equivalence Certificate (significant for salary purposes only) upon evidence that the applicant has completed graduate courses in accordance with requirements stated in a bulletin which may be secured from the Bureau of Teacher Certification in the Department of Education.

The College welcomes teachers who wish to use its resources to fulfill the course requirements for the certificate. No formal program is constructed for this purpose and

no responsibility is assumed by the College, but students are invited to consult the Dean of Graduate Studies when selecting courses. Students who wish to take courses for this purpose are classified in Category 510.

2.27 GRADUATION

It is the responsibility of the student to apply for graduation not later than the final date stated in the official graduate calendar. A form to apply for graduation may be secured at the Graduate Office.

The dates for completion of thesis and department papers, comprehensive examinations, defense of thesis, payment of graduation fees (and binding fees if applicable) are also listed in the official graduate calendar. The dates provide minimum time necessary to compile graduation lists, order diplomas and academic costumes, and complete other necessary details.

A student who files an application for graduation after the specified date will be included in the first subsequent commencement; however, a student is eligible upon completion of all degree requirements to receive a letter certifying that the requirements for the degree have been completed and stating the date upon which the degree is to be formally conferred.





3. INTER-DISCIPLINARY STUDIES

Inter-disciplinary courses listed in this section are planned by more than one department. The courses are sometimes taught by teams of faculty members. The student should consult his/her advisor to determine the appropriateness of these courses for a particular degree program.

COURSES

(Code 09)

09.401 HISTORY AND POLITICS OF THE USSR

3 sem. hrs.

This course seeks to give students sufficient background in history and political science to enable the student to better understand the USSR. It will provide them with some of the major developments in the Soviet Union since 1917 in order to make contemporary affairs in that country more understandable. Combining lectures, films, slides, outside speakers, readings and discussion it will serve to give them sufficient background to more readily evaluate what they will experience while in the USSR.

09.427 SOCIALISM: THEORY AND HISTORY

3 sem. hrs.

A survey of socialist philosophies from Biblical times to present concentrating on the theories of Marx, Engels, Lenin and Mao and including review of the major historical events surrounding socialist development.

4. SCHOOL OF ARTS AND SCIENCES

4.1 HUMANITIES

FOREIGN LANGUAGES

NOTE: Specialization in French, German, and Spanish for the Master of Education Degree is suspended temporarily.

Purpose: These specializations are designed to meet the needs of pre-service and in-service teachers in secondary and elementary schools, enhance their competency and foster their growth in the profession.

Prerequisite: An undergraduate major or its equivalent in the language. Deficiencies must be made up in addition to the credit required for the Master of Education degree.

Requirements: A minimum of eight courses (24 semester hours) in the language of specialization, including at least one course from each of the following areas:

- (1) Languages* (courses numbered 500 through 506);
- (2) Culture and Civilization (course numbered 510 through 515);
- (3) Literature (520 through 560);

*Problems of Teaching Foreign Languages (65.568) may be used in this group.

A comprehensive written and oral examination is required. Examinations: (1) Prior to the adviser's endorsement of the application for admission to candidacy, the student is tested in the four basic language skills (reading, writing, speaking and understanding). (2) The comprehensive examination is given following the completion of the course work in the language of specialization; it is conducted primarily in the language of specialization and deals with courses taken by the student.

NOTE: Studies Abroad in French, German, and Spanish (10.597, 11.597, and 12.597 respectively) are available upon occasion. Please contact the Dean of Graduate Studies.

COURSE DESCRIPTIONS

FRENCH
(Code 10)

NOTE: Specialization in French for the M.Ed. degree is suspended temporarily.

10.500 (514) SYNTAX	3 sem. hrs.
Systematic review of advanced French grammar.	
10.501 LINGUISTICS	3 sem. hrs.
An introduction to the study of language as a science. A history of the French language. The application of the science of linguistics to the teaching of French.	
10.502 (514) STYLE AND STYLISTICS	3 sem. hrs.
Acquisition of accuracy in written compositions and intensive analysis of selected modern prose work.	
10.503 (513) ADVANCED FRENCH PHONETICS	3 sem. hrs.
Study of the sounds of French through the application of the international phonetic alphabet. Laboratory drills and recordings.	
10.504 ORAL EXPRESSION	3 sem. hrs.
Acquisitions of fluency in speech on contemporary usage. Oral reports, guided discussions and explication de textes.	
10.505 ADVANCED STRUCTURE AND TRANSLATION	3 sem. hrs.
Contrastive analysis of French and English patterns; problems of translation; practice in French-English, and English-French translations.	
10.506 FRENCH LANGUAGE WORKSHOP	3 sem. hrs.
Discussion of methodology and techniques. Preparation of pattern drills and oral tests. The function of laboratories. Analysis of current textbooks.	
10.510 CONTEMPORARY FRENCH CIVILIZATION	3 sem. hrs.
Life, institutions, and culture of contemporary France. Readings in current newspapers and magazines. France's contributions to Western civilization.	
10.515 CULTURE AND CIVILIZATION THROUGH HISTORY	3 sem. hrs.
People, institutions, forces, and ideas which have shaped France throughout the centuries.	
10.520 HISTORY OF IDEAS AND LITERARY CURRENTS	3 sem. hrs.
Study of major philosophic and literary movements, and impact upon literature and culture of France.	
10.530 (539) TECHNIQUES IN LITERARY CRITICISM	3 sem. hrs.
Use of bibliographical aids in research. Acquaintance with the various critical approaches to the study and appreciation of literature.	
10.540 SEMINAR IN MEDIEVAL AND RENAISSANCE LITERATURE	3 sem. hrs.
Exploration of particular authors, certain genres, or special topics.	
10.550 SEMINAR IN 17TH AND 18TH CENTURY LITERATURE	3 sem. hrs.
Exploration of particular authors, certain genres, or special topics.	
10.560 SEMINAR IN 19TH AND 20TH CENTURY LITERATURE	3 sem. hrs.
Exploration of particular authors, certain genres, or special topics.	
10.590 INDEPENDENT STUDY	1-9 sem. hrs.
Individual study of a particular aspect of French civilization, language, or literature under the supervision of a graduate faculty member. Upon special circumstances and student needs. <i>Consult Department Chairperson.</i>	
10.597 STUDIES ABROAD	3-6 sem. hrs.
College-organized programs abroad.	

10.598 SPECIAL PROBLEMS**3. sem. hrs.**

Areas of French language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiencies, in which case it will not count toward a degree. May be repeated.

COURSE DESCRIPTIONS**GERMAN**
(Code 11)

Note: Specialization in German for the M.Ed. degree is suspended temporarily.

11.500 (511) HISTORY OF THE GERMAN LANGUAGE**3 sem. hrs.**

An introduction to the development of the German language from its beginning to the present day.

11.501 ADVANCED GERMAN LANGUAGE**3 sem. hrs.**

Advanced grammar, syntax, and composition.

11.502 (514) STYLE AND STYLISTICS**3 sem. hrs.**

Modern prose selections illustrating contemporary German usage.

11.505 ADVANCED TEXTS IN "NACHERZAHLEN" AND TRANSLATION**3 sem. hrs.**

Texts given for oral and written mastery; translation exercises from English into German.

11.506 GERMAN LANGUAGE WORKSHOP**3 sem. hrs.**

Review of present-day methods and materials for teaching.

11.510 CONTEMPORARY GERMANY**3 sem. hrs.**

The economic, political, social, and cultural aspects of East and West Germany since World War II.

11.511 GERMAN CULTURE**3 sem. hrs.**

A historical and cultural presentation of the contributions of the German-speaking world.

11.525 CONTEMPORARY GERMAN LITERATURE**3 sem. hrs.**

German literature since World War II.

11.526 MODERN GERMAN LITERATURE**3 sem. hrs.**

German literature from the latter part of the 19th century to World War II.

11.535 (521-522) GOETHE AND SCHILLER**3 sem hrs.**

The cultural, literary, and aesthetic contributions of Goeth and Schiller to modern German.

11.536 THE ROMANTIC MOVEMENT**3 sem. hrs.**

The early Romantic poets and their works. Das Marchen and Das Marchenhafte in German literature.

11.570 (560) RESEARCH PROJECT**3 sem. hrs.**

A topic, to be written in German, on a cultural or literary theme.

11.597 STUDIES ABROAD**3-6 sem. hrs.**

College-organized programs abroad.

11.598 SPECIAL PROBLEMS**3 sem. hrs.**

Areas of German language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiency, in which case it does not count toward a degree. May be repeated.

COURSE DESCRIPTIONS**SPANISH**
(Code 12)

NOTE: Specialization in Spanish for the M.Ed. degree is suspended temporarily.

12.421 SEMINAR IN SPANISH LITERATURE	3-6 sem. hrs.
Study of a particular genre, movement, period, work, or author. May be repeated once for a total of 6 semester hours.	
12.423 SEMINAR IN SPANISH AMERICAN LITERATURE	3-6 sem. hrs.
Study of a particular genre, movement, period, work, or author. May be repeated once for a total of 6 semester hours.	
12.502 ADVANCED STUDY OF SPANISH STYLISTICS	3 sem. hrs.
Study of Spanish grammar stressing creative written expression in the language.	
12.503 ADVANCED SPANISH PHONETICS	3 sem. hrs.
Study of the sounds of Spanish with some remarks on regional differences. Designed to develop mastery of correct pronunciation and intonation of Spanish. Laboratory drills and recordings.	
12.504 (501) ORAL EXPRESSION	3 sem. hrs.
Acquisition of fluency in speech, based on contemporary usage. Oral reports and guided discussions.	
12.505 ADVANCED STRUCTURE AND TRANSLATION	3 sem. hrs.
Contrastive analysis of Spanish and English patterns. Spanish syntax. Problems of translation. Practice in Spanish-English and English-Spanish translation.	
12.506 (551) SPANISH LANGUAGE WORKSHOP	3 sem. hrs.
Discussion of methodology and techniques. Preparation of pattern drills and oral tests. The functions of laboratories. Analysis of current textbooks.	
12.510 PENINSULAR CIVILIZATION	3 sem. hrs.
Panoramic view of peninsular civilization through discussion, realia, and selected texts. Outside readings in Spanish.	
12.511 SPANISH AMERICAN CIVILIZATION	3 sem. hrs.
Panoramic view of Spanish American civilization through discussion, realia, and selected texts. Outside readings in Spanish.	
12.530 (533) CERVANTES	3 sem. hrs.
Study and analysis of the life and works of Cervantes. Emphasis on the <i>Quijote</i> .	
12.534 (541) GENERATION OF 98	3 sem. hrs.
Study and analysis of the major writers of the period such as Azorin, Unamuno, and Baroja.	
12.535 SEMINAR IN MEDIEVAL PENINSULAR LITERATURE	3 sem. hrs.
Exploration of a particular author, genre, or special topic.	
12.536 SEMINAR IN 16TH AND 17TH CENTURY PENINSULAR LITERATURE	3 sem. hrs.
Exploration of a particular author, genre, or special topic.	
12.537 SEMINAR IN 18TH AND 19TH CENTURY PENINSULAR LITERATURE	3 sem. hrs.
Exploration of a particular author, genre, or special topic.	
12.538 SEMINAR IN 20TH CENTURY PENINSULAR LITERATURE	3 sem. hrs.
Exploration of a particular author, genre, or special topic.	
12.540 (542) MODERNISM	3 sem. hrs.
Study and analysis of the Modernist movement in poetry and prose, with particular emphasis on Ruben Dario.	
12.544 LITERATURE OF THE MEXICAN REVOLUTION	3 sem. hrs.
Study and analysis of literary works of the Mexican Revolution, including such writers as Azuela, Guzman, and Lopez y Fuentes.	
12.547 SEMINAR IN PRE-19TH CENTURY SPANISH AMERICAN LITERATURE	3 sem. hrs.
Exploration of a particular author, genre, or special topic.	

12.548 SEMINAR IN 19TH CENTURY SPANISH AMERICAN LITERATURE 3 sem. hrs.

Exploration of a particular author, genre, or special topic.

12.549 SEMINAR IN 20TH CENTURY SPANISH AMERICAN LITERATURE 3 sem. hrs.

Exploration of a particular author, genre, or special topic.

12.590 INDEPENDENT STUDY 1-9 sem. hrs.

Individual study of a particular aspect of Hispanic civilization, language, or literature under the supervision of a graduate faculty member. Upon special circumstances and student needs. (Consult Department Chairperson.)

12.597 STUDIES ABROAD 3-6 sem. hrs.

College-organized programs abroad.

12.598 SPECIAL PROBLEMS 3 sem. hrs.

Areas of Spanish language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiencies, in which case it will not be counted toward a degree. May be repeated.

ENGLISH

(Code 20)

Note: Specialization in English for the M.A. degree is suspended temporarily.

Major in English for the Master of Arts Degree

Prerequisite: Thirty semester hours in undergraduate courses in English in addition to freshman composition, preferably including Shakespeare, American and British Literature and history or grammar of the English language. Program adjustments for students with undergraduate deficiencies may require undergraduate courses to be taken in addition to those for the Master's degree.

Requirements for the Degree: A minimum of thirty semester hours, including the following: 20.493 (unless completed in undergraduate work);

20.501 or 502 (unless completed in undergraduate work);

Two courses in British Literature, including Shakespeare or Chaucer (unless completed in undergraduate work);

One course in American Literature; 20.531; 20.500.

Electives in graduate courses in English to make the total for the degree at least thirty semester hours.

Foreign Languages: Reading proficiency in at least one language other than English, preferably at the level of second-year college study.

Examinations: (1)Oral defense of thesis. (2)A written examination on three fields in English determined by a committee of the English Department in consultation with the student.

Specialization in English for the Master of Education Degree

Note: Specialization in English for the M.Ed degree is suspended temporarily.

Prerequisites: Same as those for M.A. Degree in English plus valid teaching certificate in secondary English.

Requirements for the Degree: 20.493; 20.500 or 20.531; electives in English listed in this bulletin for a total of at least thirty semester hours (including required Education courses specified in Section 2.23 herein).

COURSE DESCRIPTIONS**20.413 LANGUAGE IN AMERICAN SOCIETY 3 sem. hrs.**

Social, political, and philosophical perspectives on the historical development and current status of English and other languages in American society.

20.482 MILTON 3 sem. hrs.

A comprehensive study of the poetry and prose of John Milton.

20.492 LITERARY CRITICISM	3 sem. hrs.
An examination in depth of major critics from Aristotle to the present with emphasis on application of critical principles to primary genres-drama, novel, poetry-and on independent study in varied areas of literature and aesthetics.	
20.493 (503) BIBLIOGRAPHY AND LITERARY RESEARCH	3 sem. hrs.
History of literary scholarships, study of book production, and practice in preparing specialized bibliographies and in planning scholarly projects.	
20.494 RHETORIC OF LITERATURE	3 sem. hrs.
Study of major rhetorical devices used by writers in the various literary genres.	
20.500 MASTER'S RESEARCH PAPER	6 sem. hrs.
An extensive and creditable scholarly paper on a topic to be determined by the student in conjunction with his/her adviser.	
20.501 STRUCTURE OF ENGLISH	3 sem. hrs.
A linguistic study of modern English and its varieties, including phonology, morphology, lexicography and syntax.	
20.502 HISTORY OF THE ENGLISH LANGUAGE	3 sem. hrs.
A detailed survey and analysis of the major language changes from Anglo-Saxon to Modern English, with attention to the history of the English-speaking peoples.	
20.503 APPLIED ENGLISH LINGUISTICS	3 sem. hrs.
Experimental, project-oriented course in application of modern linguistic theory to classroom situations.	
<i>Prerequisite: 20.501, or comparable graduate or undergraduate course in structural linguistics.</i>	
20.509 JOURNALISM FOR HIGH SCHOOL TEACHERS	3 sem. hrs.
For high school teachers who offer courses in journalism or advise the school newspaper: staff recruiting; organization; gathering, writing, editing news; writing other journalistic forms; libel, censorship, freedom of press; business. Lectures, workshops, field trips. Applicable toward M.Ed., but not M.A. in English.	
20.521 CONTEMPORARY SHORT STORY	3 sem. hrs.
Main lines of development of the short story from the mid-nineteenth century to the present. Attention is given to individual writers, especially major figures; to analysis and evaluation of individual stories; and to the characteristics of the genre.	
20.522 MODERN DRAMA	3 sem hrs.
Main forces and movements in modern drama through selected dramatists from the time of Ibsen.	
20.524 CONTEMPORARY NOVEL	3 sem. hrs.
Writers and the trends of the novel in the modern era, with emphasis on British and American works.	
20.526 MODERN POETRY	3 sem. hrs.
Reading of a comprehensive selection of modern poetry, British and American. Emphasis on appreciating the art of the poems, on recognizing the modern spirit in them, and on viewing them as part of a historical development of poetic tradition.	
20.528 LITERATURE FOR THE ADOLESCENT	3 sem. hrs.
Reading, study of books for the adolescent: consideration of literary qualities, evaluation criteria, human values in literature; approaches to literature; book selection, censorship, students' right-to-read. Applicable toward M.Ed., but not M.A. in English.	
20.531 SEMINAR	3 sem. hrs.
For advanced students near graduation. Each student in Seminar will pursue his/her own line of study under the guidance of the instructor and in an area of study determined by the student and his/her adviser. Notice of intention to register for Seminar must be given the instructor of the course at least two months before the course begins.	

20.532 MAJOR BRITISH AUTHORS	3 sem. hrs.
Study of one or more major writers in English literature. Authors included vary with each presentation of the course.	
20.533, 534, 535 STUDIES IN BRITISH LITERATURE	3 sem. hrs.
Specialized areas of British literature such as literary forms, ideas, and movements. Content varies each time the course is offered.	
20.542 EARLY ENGLISH DRAMA	3 sem. hrs.
The growth of a native drama from the Middle Ages to the closing of the theatres in 1642; emphasis is on Shakespeare's contemporaries and Jacobean dramatists.	
20.543 CHAUCER	3 sem. hrs.
Major works, with emphasis on the mind and art of Chaucer and considerable attention to the Middle English language. Medieval background and various specialized scholarly problems are also dealt with.	
20.547 ELIZABETHAN POETRY	3 sem. hrs.
Elizabethan poetry, particularly the sonnet, lyric, and narrative of the 1590's, is examined for structure, origins, and influences. Students are encouraged to develop topics on the works of individual poets.	
20.549 SHAKESPEARE	3 sem. hrs.
A few selected plays are closely read. From this study are developed topics in biography and dating, textual history, sources, and contemporary and earlier intellectual influences.	
20.556 RESTORATION AND LATER DRAMA	3 sem. hrs.
Trends in comedy and tragedy from the reopening of the theatres in 1660 through the 1770's. Among the dramatists studied are Congreve, Dryden, Wycherley, Steele, Goldsmith, and Sheridan.	
20.559 AGE OF JOHNSON	3 sem hrs.
Depth study of such major figures of the mid-eighteenth century as James Boswell, Samuel Johnson, Oliver Goldsmith, Richard Savage, Samuel Richardson, Henry Fielding, Laurence Sterne, and Richard Brinsley Sheridan. Independent research is based on both such major literary personalities and minor authors of the period.	
20.563 19TH CENTURY NOVEL	3 sem. hrs.
Development of the novel as a major literary form of the Victorian age. A study of such major English novelists as Austen, Scott, the Brontes, Dickens, Thackeray, Trollope, Eliot, and Hardy. Supplementary readings in other novelists of the period, and in secondary source materials.	
20.565 ENGLISH ROMANTIC POETS	3 sem. hrs.
Important segments of the work of the major Romantic poets to disclose the characteristics of the work and thought of each writer. Some attention given to background of the period and its literary forebears and descendants.	
20.569 VICTORIAN LITERATURE	3 sem. hrs.
A study in depth of some aspect or combination of aspects of literary significance in the Victorian Age-author(s), genre, specific works.	
20.582 AMERICAN LITERATURE: EARLY	3 sem. hrs.
Prose writers and poets of Colonial and Federalist America: Bradstreet, Taylor, Edwards, Franklin, Paine, Jefferson, Freneau, and Tyler. An intensive study of Puritanism and its role in the literature of these periods.	
20.583 AMERICAN LITERATURE: MIDDLE	3 sem. hrs.
Major writers of the American Renaissance and other important Romantic writers of the 19th century: Irving, Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson. Particular emphasis given to the role these writers played in interpreting the American experience.	
20.584 AMERICAN LITERATURE: MODERN	3 sem. hrs.
Since much of 20th century American literature achieves its greatest intensity in being critical of native, traditional values, the course examines such representative writers as Dreiser, Anderson, Lewis, Frost, Eliot, Hemingway, Fitzgerald, and Faulkner.	

20.587 MAJOR AMERICAN AUTHORS**3 sem. hrs.**

Study of one or more major writers in American literature. Writers included vary with each presentation of the course.

COMMUNICATION
(**Code 23**)

Major in Communication for the Master of Arts Degree

Required: A total of 30 semester hours including Communication 23.501, 23.502, 23.503, 23.504.

Elective: Six to twelve semester hours chosen from courses offered by the Department of English and the Department of Speech, Mass Communication, and Theatre. Six to nine semester hours chosen from courses offered in related disciplines after consultation with the student's adviser.

Three semester hours as an optional research project: 23.598.

COURSE DESCRIPTIONS**23.501 NATURE OF COMMUNICATION****3 sem. hrs.**

Primarily a theoretical survey of the major categories of the field of communication.

23.502 INTERPERSONAL COMMUNICATION**3 sem. hrs.**

A survey of the changing roles of laws, customs, and expectations as they relate to social interaction between people of one culture or of different cultures.

23.503 NON-PRINT MEDIA**3 sem. hrs.**

A survey of the history and theory of radio, television and film. Theoretical emphasis combined with practical experience gained through field trips and media projects.

23.504 PRINT MEDIA**3 sem. hrs.**

An in-depth examination of publishing from the historical, theoretical, and other critical viewpoints.

23.598 MASTER'S RESEARCH PROJECT**3 sem. hrs.**

Independent research on a topic approved by the student's adviser(s).

SPEECH COMMUNICATION AND THEATRE ARTS

NOTE: Specialization in Speech and Theatre for the M.Ed. degree is suspended temporarily.

Required: Speech 25.501 or 25.510;

Speech 25.502 or 25.557.

Elective: Eighteen semester hours is in two areas:

Public Address: 25.503, 25.504, 25.515, 25.520, 25.530, 25.585, 25.590.

Theatre: 26.551, 26.553, 26.554, 26.558, 26.560, 26.565, 26.566, 26.570, 26.575, 26.577, 26.580, 26.590.

If 25.590 (Master's Research Paper) is not included, the candidate must submit a departmental paper.

COURSE DESCRIPTIONS**PUBLIC ADDRESS**

(Code 25)

Senior Level Undergraduate Courses Open to Graduate Students

(For course descriptions, see Undergraduate Bulletin)

25.421 PERSUASION**3 sem. hrs.****25.445 ORGANIZATIONAL COMMUNICATION****3 sem. hrs.**

An explanation of the theoretical and practical aspects of how communication patterns develop in organizations.

25.492 SPEECH SEMINAR: PUBLIC ADDRESS**3 sem. hrs.**

25.501 INTRODUCTION TO RESEARCH IN SPEECH	3 sem. hrs.
An overview of the fields of research in Speech and an examination of the contributions of professional Speech organizations, graduate studies and research. Historical, descriptive, experimental and evaluating research studies are examined. A pilot thesis is required of each student to demonstrate competency in research techniques and the use of bibliographical resources.	
25.502 RHETORICAL CRITICISM	3 sem. hrs.
The nature of rhetorical criticism. The development of rhetorical theory from the Homeric period to the modern theorists. Methods of the critics during antiquity, the intermediate period (1600-1850) and methods of the modern critics.	
25.503 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS	3 sem. hrs.
Evaluation and discussion of the development and application of rhetoric in America in terms of the speaker, speech and times. American speakers selected from a cross-section in history prestudied from the viewpoints of biographical background nature and extent of speaking, audience reaction, the speaker's basic ideas, his preparation, arrangement and style, basic philosophy, and platform behavior.	
25.504 BRITISH ORATORY	3 sem. hrs.
Burke, Fox, Sheridan, George, Bevan, Churchill and other orators in the 17th through the 20th centuries. Analysis of style, philosophies, and effectiveness, and their contribution to rhetoric theory.	
25.505 ANCIENT RHETORIC	3 sem. hrs.
The ancient rhetoricians Aristotle and Plato, Cicero, Longinus and Quintilian. Emphasis is on the analysis and critical concepts of these men, with a study of later interpretations of their works.	
25.510 CURRENT PROBLEMS IN SPEECH ACTIVITIES	3 sem. hrs.
Current speech practices in the secondary school. Methods of initiating, improving, and expanding speech programs.	
25.515 ADVANCED PERSUASION AND PROPAGANDA	3 sem. hrs.
Techniques of attitude modification through persuasion and propaganda. Practical application of the techniques by each student.	
25.520 ADVANCED ORAL INTERPRETATION	3 sem. hrs.
Understanding and appreciation of literature through developing skill in reading aloud. Selecting, adapting, and preparing material for presentation in high school classes.	
<i>Prerequisite: Consent of instructor.</i>	
25.530 ADVANCED RADIO AND TELEVISION	3 sem. hrs.
Practice and study of techniques of television announcing, writing (news and drama), directing, program planning, and performing. Instructional radio and television. Laboratory hours required.	
<i>Prerequisite: Beginning course in Radio and Television.</i>	
25.585 PUBLIC ADDRESS SEMINAR	3 sem. hrs.
Specialized study by the class. The subject is selected by the instructor from Public Address.	
25.586 PUBLIC ADDRESS SEMINAR	3 sem. hrs.
25.587 PUBLIC ADDRESS SEMINAR	3 sem. hrs.
25.590 MASTER'S RESEARCH PAPER	3 sem. hrs.
<i>COURSE DESCRIPTIONS</i>	
THEATRE	
(Code 26)	
Senior Level Undergraduate Courses Open to Graduate Students	
<i>(For course descriptions, see Undergraduate Bulletin)</i>	
26.411 PLAY DIRECTION	3 sem. hrs.
26.414 COSTUMING FOR THE STAGE	3 sem. hrs.

26.415 HISTORY OF THE THEATRE	3 sem. hrs.
26.416 MODERN THEATRE	3 sem. hrs.
26.490 SPEECH SEMINAR: THEATRICAL CRITICISM	3 sem. hrs.
26.551 ADVANCED ACTING	3 sem. hrs.
Study and research, with performance, of the acting styles in each of the major historical periods of world theatre. Laboratory hours.	
<i>Prerequisite: Consent of instructor.</i>	
26.553 ADVANCED COSTUMING	3 sem. hrs.
History of costuming from the viewpoint of design and construction. Costume wardrobe, fabrics, budget. Each student designs costumes for a major production. Laboratory hours.	
26.554 ADVANCED DIRECTING	3 sem. hrs.
Advanced play production principles and their application to the staging of classical and modern plays. Analysis of styles from the Greek to the present day. Each student directs a play. Laboratory hours.	
<i>Prerequisite: Consent of instructor.</i>	
26.557 THEATRICAL CRITICISM	3 sem. hrs.
Theatrical criticism from Aristotle's <i>Poetics</i> to present day. Emphasis is on the comic and tragic theories. Analysis of critical standards and methods; their application to evaluating drama in performance.	
26.558 WORLD THEATRE	3 sem. hrs.
A study in depth of the theatres throughout the world in their historical and contemporary context. The student should have had some course work in history of the theatre.	
<i>Prerequisite: Consent of instructor.</i>	
26.560 PLAYWRITING	3 sem. hrs.
Dramatic structure, writing styles, and types of drama. Each student writes at least one play. Adaptations of other forms of literary works are examined.	
26.565 ADVANCED THEATRE PRODUCTION	3 sem. hrs.
Technical information and skills needed to mount a play or a musical. Advanced stagecraft and stage carpentry.	
<i>Prerequisite: Consent of instructor.</i>	
26.566 THEATRE DESIGN AND LIGHTING	3 sem. hrs.
Principles and styles of design and lighting as applied to period and modern drama. Each student is required to design the setting and lighting of a show outside of the modern period and to present detailed drawings and elevations of his/her design in a production book.	
<i>Prerequisite: Consent of Instructor.</i>	
26.570 LITERATURE OF THE THEATRE	3 sem. hrs.
A study of the plays, playwrights and dramatic literature of the theatre's "golden ages," with a view to their production on a contemporary stage.	
26.575 EXPERIMENTAL THEATRE	3 sem. hrs.
An investigation and analysis of theatrical styles outside of the realistic theatre. Plays and scenes studied and presented in their original style and form. The non-illusionistic theatre is given primary consideration.	
<i>Prerequisite: Directing.</i>	
26.577 THEATRE MANAGEMENT	3 sem. hrs.
Designed for the director of the theatre in the secondary school. Box office, publicity, house management, and organization of the theatre staff. Public relations; budget; business practices.	
26.580 THEATRE SEMINAR	3 sem. hrs.
Specialized study by the class. The subject is selected by the instructor from Theatre.	
26.581 THEATRE SEMINAR	3 sem. hrs.
26.582 THEATRE SEMINAR	3 sem. hrs.

26.590 MASTER'S RESEARCH PAPER**3 sem. hrs.**

An opportunity is provided for the student to demonstrate his/her ability to employ accepted methods of carrying on and reporting research in the solution or intensive study of some area of interest or concern.

Also listed as 25.590.

ART
Specialization in Art for the
Master of Arts Degree

Prerequisites: An undergraduate major in art (fine arts or art education). In the case of a non-art undergraduate major, it may be necessary to make up the deficiencies without graduate credit.

Admission Requirements: Completion of appropriate admissions forms; official transcript of undergraduate work; an 8x10 plastic sleeve of slides representative of one's creative work; a one-page statement of one's objectives and philosophy; a personal interview and the results of a Miller Analogies examination, arranged by the Graduate Office.

Course Requirements: Four levels in the advanced studio area of the student's specialization; related work in other studio areas, art history, art education, or outside fields; thesis; and a one-person exhibition of the candidate's creative work for a minimum of 30 credit hours of course work.

COURSE DESCRIPTIONS

GENERAL AND ART EDUCATION
(Code 30)

30.590 CURRENT THEORIES OF ART AND ART EDUCATION**3 sem. hrs.**

This course will focus on current theories of art and art education practiced in American schools with an emphasis on eventual application. A research paper or research project will be required.

30.591 ADVANCED VISUAL ARTS FOR EXCEPTIONAL CHILDREN**3 sem. hrs.**

The importance of art activity as a means of enriching and stimulating a special child's awareness of himself and his world is stressed. Emphasis is placed on those positive aspects for creative activity which the handicapped child possesses. Since an image, perceptual or cognitive, is an almost instantaneous form of acquiring knowledge, those areas dealing with imagery become vital to the educational process of children who are unable to comprehend abstractions or who have need of intense learning situations. These images may be a finalized visual experience or may serve as a catalyst to introduce or reinforce other learnings. The aesthetic experience involved in art experiences can be used to increase a feeling of self-worth or to satisfy a basic human need for creative and aesthetic satisfaction.

30.595 THESIS**3 sem. hrs.**

COURSE DESCRIPTIONS

ART HISTORY
(Code 31)

31.560 READINGS AND RESEARCH IN CONTEMPORARY ART HISTORY**3 sem. hrs.**

A detailed study of contemporary movements in art from the late nineteenth century to the present, with readings and research for advanced students.

31.565 READINGS AND RESEARCH IN AMERICAN ART HISTORY**3 sem. hrs.**

Advanced study of the history of visual arts in America.

31.570 READINGS AND RESEARCH IN EARLY EUROPEAN ART HISTORY**3 sem. hrs.**

The research focus for this course will be on specific topics relating to the periods from pre-historic to the gothic.

31.571 READINGS AND RESEARCH IN LATER EUROPEAN ART HISTORY**3 sem. hrs.**

The period from the early renaissance to the French neo-classic provides the thrust for this course.

31.575 READINGS AND RESEARCH IN ORIENTAL ART HISTORY 3 sem. hrs.

This course is intended to be an advanced survey of Oriental Art in the broadest sense of the word: The art and architecture of the ancient Near East, Japan, China, and India. An introduction to both monuments and cultural ideas, the course exposes the advanced student to basic problems in chronology, style, and research methodology.

Prerequisite: 31.325, 3

31.580 READINGS AND RESEARCH IN ARCHITECTURAL ART HISTORY 3 sem. hrs.

An advanced survey of the evolution of architecture in the western world from the Pharaonic Egyptian period through the contemporary twentieth century. Typical and outstanding examples of each period studied will be discussed and researched by the general student. Imperative to an understanding of the physical structures studied will be an analysis of the type of society and the rationale for the creation of such an architecture.

31.585 ART AND CULTURE OF FRANCE 3 sem. hrs.

A study-tour of France with specific attention to French Art seen in relation to its social and cultural environment. Visits will be made to places of artistic and cultural interest in and around Paris, and specific areas of France where the emphasis is for the particular course of study. This course will also be offered under Extended Programs for advanced students and members of the community.

31.592 READINGS AND RESEARCH IN ADVANCED VISUAL AESTHETICS 3 sem. hrs.

Advanced study of the "silent image" and viable aesthetic positions in the plastic arts emphasizing artistic and perceptual awareness and concern with environmental relationships.

31.595 DIRECTED STUDY IN ART HISTORY 3 or 6 sem. hrs.

The advanced study of a topic in the area of art history. Following an intensive review of the scholarly literature in the field, a paper, meeting contemporary standards of publication in the field, will be required under the direction of a faculty advisor.

COURSE DESCRIPTIONS**ART STUDIO
(Code 32)****32.500 ADVANCED CERAMICS I 3 sem. hrs.**

The student will define in writing his present level of knowledge and competency. From this information, he/she can then prepare a plan of study that will allow for a direction of work. The student will be responsible for making and firing his own work.

32.501 ADVANCED CERAMICS II 3 sem. hrs.

At this level, the student will intensify his/her study by selecting a specialized problem relating to the experiences gained in Advanced Ceramics I.

32.502 ADVANCED CERAMICS III 3 sem. hrs.

The student will continue to pursue an advanced and refined level of study in the discipline of creating an art object. A specialized problem relating to the experiences gained in the first two levels will facilitate a continuity in learning.

32.503 ADVANCED CERAMICS IV 3 sem. hrs.

At this level, the student's work should reflect a professional and philosophical attitude. The student will be required to have an exhibition of his/her work.

32.510 ADVANCED DRAWING I 3 sem. hrs.

An exploration and deep individual involvement of personal expression and imagery will be expected in level I.

32.511 ADVANCED DRAWING II 3 sem. hrs.

Emphasis at level II will be on the development of individual themes and projects.

32.512 ADVANCED DRAWING III 3 sem. hrs.

Focus on personal expression and imagery for potential thesis statement—self-direction and innovation will be expected.

32.513 ADVANCED DRAWING IV 3 sem. hrs.

Concentration and production of a group of drawings for a unified thesis statement.

32.520 ADVANCED CRAFTS I	3 sem. hrs.
Advanced levels of experimentation with contemporary idioms in crafts design. Emphasis on highly professional concepts of form and methods and on an investigation and a refinement of techniques as a means of realizing significant visual statements in crafts. Individualized instruction and independent planning for each student for all four levels.	
32.521 ADVANCED CRAFTS II	3 sem. hrs.
Individual concentration on specific media and related techniques. Intense involvement with refined design schemes, systems and variations that are oriented toward an increasingly more defined singular direction in crafts.	
32.522 ADVANCED CRAFTS III	3 sem. hrs.
Highly independent and mature involvement with advanced concepts, methods, and processes in a specific crafts direction. (At this level, students should begin to develop a thesis presentation which should emerge from studio experiences, independent research and from a wide highly selective exposure to craft objects in museums, galleries, and private studios. During periods in which college classes are not officially in session, apprenticeship arrangements will be made, where possible, for students to work in professional studios as far north as New York City and as far south as Washington, D.C.)	
32.523 ADVANCED CRAFTS IV	3 sem. hrs.
A continued involvement with advanced concepts in crafts. Concentration on completing final works for a one-man show or for a one-woman show. A definitive position paper reflecting a personal philosophy in crafts should be developed. Focus on developing the power of self-evaluation, and on business, professional and marketing practices in crafts as well as on teaching and other careers in crafts. Visiting professionals, including American Crafts Council representatives and others, will be brought in to discuss aesthetic, technical, business, and educational practices. These sessions will be recorded on tape for future classes.	
32.530 ADVANCED GRAPHICS I	3 sem. hrs.
Advanced level exploration of traditional (Relief, Intaglio, Serigraphic, Lithographic, and Photographic) or experimental printmaking methods. Emphasis on personalized imagery and technical proficiency.	
32.531 ADVANCED GRAPHICS II	3 sem. hrs.
Exploration of advanced level printmaking including color and color registration.	
32.532 ADVANCED GRAPHICS III	3 sem. hrs.
Focus on personalized forms for potential thesis statement. (Students are expected to be innovative and proficient in the technology of printmaking).	
32.533 ADVANCED GRAPHICS IV	3 sem. hrs.
Concentration on the selected forms for a unified thesis statement will be expected in level IV.	
32.540 ADVANCED PAINTING I	3 sem. hrs.
Search into purpose of painting with specific attention to traditional methods, i.e., glazing, egg tempera, and underpainting.	
32.541 ADVANCED PAINTING II	3 sem. hrs.
Exploration into different approaches of painting for individual expression. Achievement in representational painting.	
32.542 ADVANCED PAINTING III	3 sem. hrs.
Continued development into maturity of individual style—special emphasis on mural painting designed into architectural space.	
32.543 ADVANCED PAINTING IV	3 sem. hrs.
Mature fulfillment of personal expression. Painting should reflect continuity of intent and style. A selection of work will be prepared for exhibition and thesis.	
32.550 ADVANCED SCULPTURE I	3 sem. hrs.
An introduction to the advanced sculpture of: 1.Historical, 2.Transitional, 3.Classicism, 4.Constructivism, 5.Surrealism, 6.Expressionism, 7.Environmental, 8.Dehumanization/mechanization, 9.Super realism, 10.Humanization/Process, and 11.Situational.	

32.551 ADVANCED SCULPTURE II

3 sem. hrs.

The student will continue to experiment while still being concerned with the concept form. At this level, more positive philosophical ideas should begin to grow and be developed.

32.552 ADVANCED SCULPTURE III

3 sem. hrs.

At this level, the student's work should reflect a significant transition from experiments to a more definite direction in technique and aesthetic opinion.

32.553 ADVANCED SCULPTURE IV

3 sem. hrs.

The student will continue to produce highly professional pieces of art while maintaining an awareness of his/her responsibility to society. This responsibility will be fulfilled by an exhibition of the student's work for his/ her thesis.

32.595 DIRECTED STUDY IN STUDIO ART

3 or 6 sem. hrs.

Continued development of a student's involvement in one of the selected studio areas, following the satisfactory completion of four levels of advanced study in that area. Permission of the instructor and department chairperson is required.

4.2 HISTORY AND SOCIAL STUDIES

Master of Education Program in Social Studies

Notes: Social Studies is defined as comprising Economics (40), Geography (41), History (42), Political Science (44), Sociology (45), and Anthropology (46).

Concentration: A minimum of fifteen semester hours in history or geography or political science as approved by the adviser, including a research paper or a seminar course. The adviser is appointed from the department of the concentration.

Related Field: A minimum of six semester hours in one related field as recommended by the adviser. (After one discipline has been chosen for the concentration, the remaining five disciplines designated above are termed "related field.")

Comprehensive Examination: A comprehensive examination is required.

Elective: Electives, if needed to complete the minimum of thirty semester hours, must be taken in social studies and approved by the adviser. The amount of elective credit can be deduced from Section 2.23.

COURSE DESCRIPTIONS

ECONOMICS (Code 40)

40.513 ORIGIN AND DEVELOPMENT OF CAPITALISM

3 sem. hrs.

Transition from feudalism to capitalism and the subsequent influence of leading capitalist institutions on industry, agriculture, commerce, banking, and the social movement.

40.514 LABOR ECONOMIC THEORY

3 sem. hrs.

The emphasis of the course would be on labor economic theory and its application in analyzing the issues of employment and inflation. Topics discussed would include: growth of the labor force and its composition, wage theories and wage structures, trade unionism and income distribution, economics of poverty and minimum wage, and hour laws and civil legislation. Occupational choices, job search, labor mobility and human capital formation would also be included. Students would be exposed to research and measurement methodology to meet the research requirements of the course.

40.515 PUBLIC POLICY AND BUSINESS

3 sem. hrs.

Public policies affecting the economy: historical, philosophical and legal basis of regulation; the rationale of free enterprise. Intensive analysis of selected areas of economic policy related to government action.

40.531 CURRENT ECONOMIC PROBLEMS

3 sem. hrs.

Selected economic problems of current interest and concern to our society. Basic economic principles and theories and the thinking of recognized economists of the past and present as revealed in their published works.

40.532 COMPARATIVE ECONOMIC SYSTEMS

3 sem. hrs.

A comparison of the workings and performance of the major forms of economic organization. The capitalist systems; the modern welfare states; state capitalism; communism; and socialism.

40.533 INTERNATIONAL ECONOMIC POLICIES AND RELATIONS

3 sem. hrs.

Application of modern international economic and financial analyses to emerging contemporary problems of nations trading with one another. Selected topics include customs unions; optimum currency area; international cartels; and flexible exchange rates. Impact of governmental and intergovernmental relations and regulations.

GEOGRAPHY

**Specialization in Geography for the
Master of Education Degree**

Note: Specialization in Geography for the M.Ed. degree is suspended temporarily.

Purpose: This specialization in geography is intended to increase the student's mastery of the discipline as a contribution to his/her background for teaching, and so enhance his/her scholarly background in research techniques, interpretation of data, and formats of scientific writing.

Required: Twenty-four semester hours in geography, including a Master's Research Paper, or a departmental paper, or seminar (41.590). Certain courses may be scheduled in related areas with the approval of the department.

Elective: Courses in categories 41 and 51 as approved by the adviser. The amount of elective credit required can be deduced from the comprehensive plan for the degree (See Section 2.23).

Major in Geography for the Master of Arts Degree

Note: Specialization in Geography for the M.A. degree is suspended temporarily.

Purpose: To provide a concentration in a systematic or regional aspect of geography; to further the candidate's competence in research methods and techniques and provide experience with research problems.

Prerequisite: A minimum of 18 semester hours of graduate courses in geography including 41.462 or its equivalent.

Requirements: A minimum of thirty semester hours of graduate courses in geography including 41.590 and a six semester hour master's thesis. Up to 9 semester hours in ancillary disciplines may be included with approval of the adviser in lieu of courses in geography.

Examinations: A comprehensive written examination must be taken early in the last semester of formal course work and must have been satisfactorily passed before a first thesis draft may be presented. An oral defense of thesis is required.

COURSE DESCRIPTIONS**GEOGRAPHY**

(Code 41)

41.405 THE GEOGRAPHY OF FOOD PRODUCTION

3 sem. hrs.

An in-depth examination of the characteristics of the major agricultural regions of the world and an attempt to explain how they came into being. There will also be a description of the features of the contemporary farming systems.

41.442 MAP SKILLS

3 sem. hrs.

The use of a variety of published maps for interpreting and interrelating past and present physical and cultural phenomena with a view, also, toward the future.

41.444 THE GEOGRAPHY OF INDUSTRIAL LOCATION

3 sem. hrs.

A comprehensive examination of the factors that influence the location of industries and industrial location theory will be made. Time will also be spent studying the manner in which selected industries have chosen their particular locations.

41.462 THEORETICAL AND QUANTITATIVE GEOGRAPHY

3 sem. hrs.

Conceptual frameworks, theoretical developments, methods of measuring intensity and dispersion of geographical distributions; quantitative approaches in geographical analyses.

41.501 EVOLUTION OF GEOGRAPHIC THOUGHT	3 sem. hrs.
The evolution of the scope, nature, and methodology of the discipline is the substance of this course. The development of geographic techniques and ideas along with the collection and arrangement of facts, from the Greek, Roman, and Arab periods to the present, are studied. Special emphasis is given the German, French, British, and American schools of thought.	
41.523 THE GEOGRAPHY OF SETTLEMENT	3 sem. hrs.
The facilities men build in the process of occupying an area ranging from the primitive to the complex urban agglomeration. Bases upon which settlements are founded and nurtured and their site, situation, external relationships and internal structure and morphology.	
41.524 GEOGRAPHY OF TRADE AND TRANSPORTATION	3 sem. hrs.
Basic concepts and principles. Problems of land and air transportation; establishment of ports, railroad centers and airways to handle commodity exchanges. Trade and transportation as important geographic factors in regional development.	
41.548 POLITICAL GEOGRAPHY	3 sem. hrs.
Geography foundations of political events and conditions; geographic factors significant to the formation, growth, and political behavior of states with problems such as boundaries, population distribution and other tensions.	
41.549 GEOGRAPHY OF WORLD RESOURCES AND INDUSTRIES	3 sem. hrs.
Analysis of land and water resources focusing upon their distribution, evaluation, and management.	
41.555 HISTORICAL GEOGRAPHY OF THE UNITED STATES	3 sem. hrs.
An in-depth examination of selected themes and methodology in historical geography and their application to selected topics in the United States. Emphasis will be placed on changes in the geographic elements of certain phenomena as they developed through time.	
41.556 GEOGRAPHY OF PENNSYLVANIA	3 sem. hrs.
The development of regional understandings of Pennsylvania, emphasizing man's response to changing environment; resources of the state, their extent, their use, and the need for a planned conservation program.	
41.560 GEOGRAPHY OF SOUTH AMERICA	3 sem. hrs.
The course provides an opportunity to evaluate the relative importance of environmental and cultural factors in accounting for the existence of empty and overcrowded land in the same country. Problems such as this, with implications for the entire "underdeveloped" world are examined from the geographic point of view.	
41.566 GEOGRAPHY OF ANGLO-AMERICA	3 sem. hrs.
Some of the dynamic changes taking place in the United States and Canada which are affecting the size, shape, and character of the traditional geographic regions with reference to technology, social and demographic conditions. Domestic and international policies and agreements and alterations in the resource base.	
41.571 GEOGRAPHY OF AFRICA SOUTH OF THE SAHARA	3 sem. hrs.
Political and technical change as affected by geography. These aspects and the traditional interests of the regional geographer are examined against the background of problems presented by the physical geography of this unique part of the world.	
41.575 GEOGRAPHY OF WESTERN AND MEDITERRANEAN EUROPE	3 sem. hrs.
An intensive treatment of selected areas of Western and Mediterranean Europe in terms of physical, economic, and cultural circumstances from the viewpoint of geographical influence.	
41.576 GEOGRAPHY OF SOUTH AND EAST ASIA	3 sem. hrs.
The physical, economic and cultural geography of a region Pakistan through Manchuria. Present circumstances and world relationships.	
41.580 ADVANCED CULTURAL GEOGRAPHY	3 sem. hrs.
An in-depth study of the basic principles, themes, and concepts in the field. A thorough examination of the process of spatial diffusion and spatial perception and how these processes are affected by culture will be made. Time will also be spent on making students aware of the cultural landscape, how cultural landscapes differ from place to place, and how to interpret the landscape they are observing.	

41.590 SEMINAR IN GEOGRAPHY

3 sem. hrs.

Individual students pursue in depth selected topics in geography that vary according to the student's interest and need; these provide bases for seminar discussion.

41.599 DEPARTMENTAL RESEARCH PAPERS

3-6 sem. hrs.

(Departmental Paper) - Master's Thesis.

COURSE DESCRIPTIONS**EARTH SCIENCE**

(Code 51)

(See Page 43 for Earth Science degree program).

51.451 FIELD TECHNIQUES IN EARTH AND SPACE SCIENCE

6 sem. hrs.

Intensive field and laboratory training in the use of equipment and techniques in the areas of geology, hydrology, and cartography. Field trips are integral and vital segments of the course.

51.453 OPERATION AND PROGRAMMING OF THE PLANETARIUM

3 sem. hrs.

Methods in use of the planetarium as a teaching and motivational device, supervised training and practice in the operation, use and maintenance of planetarium equipment.

HISTORY

(Code 42)

Note: Specialization in History for the M.A. degree is suspended temporarily)

The Master of Arts Degree

Prerequisites: An undergraduate major in history including a course in Bibliography and Research is prerequisite to departmental recommendation for admission to candidacy. Undergraduate deficiencies must be made up without credit.

Course Requirements(Thesis Option): 18 semester hours in graduate courses in one of the three areas of History (European Non-Western or United States), including a readings course and a seminar course; six semester hours in a second area or in one related field; a six semester hour thesis (42.599). The thesis topic must be approved by the thesis adviser, it is the student's responsibility to secure a faculty member to act as thesis adviser.

Course Requirements(Non-Thesis Option): 24 semester hours in graduate courses in one area of history including a readings course and two seminar courses, six semester hours in a second area of history, or one related field.

Foreign Language: A foreign language is required if, but only if, it is necessary for thesis research. The history faculty will guide the student in preparation for the language examination and, whenever possible, will select and administer the material for translation.

Examinations: An oral and/or written examination in the major area with a specific concentration (national or topical) within the area is required in the last term of residence of both thesis and non-thesis option students. The examination must be completed before a thesis may be submitted. Thesis option students are also responsible for an oral defense of thesis.

**Specialization in History for the
Master of Education Degree**

Note: Specialization in History for the M.Ed. degree is suspended temporarily.

Course Requirements: Fifteen semester hours in one of the three designated areas of history, including a readings and seminar course; six or nine semester hours in a minor field of history.

Comprehensive Examination: An oral and/or written comprehensive examination is required.

COURSE DESCRIPTIONS**Senior Level Courses Open to Graduate Students**

(For course description, see Undergraduate Bulletin)

42.401 CURRENT EVENTS IN HISTORICAL PERSPECTIVE

3 sem. hrs.

42.402	CURRENT EVENTS IN HISTORICAL PERSPECTIVE	3 sem. hrs.
42.424	EUROPE 1914-1939; THE FIRST WORLD WAR AND THE AGE OF THE DICTATORS	3 sem. hrs.
42.425	EUROPE SINCE 1939	3 sem. hrs.
42.452	(357)SOVIET RUSSIA	3 sem. hrs.
42.453	PROBLEMS OF CONTEMPORARY LATIN AMERICA	3 sem. hrs.
42.454	MODERN JAPAN: THE EMERGENCE OF AN ASIAN SUPERPOWER	3 sem. hrs.
42.456	20TH CENTURY MIDDLE EAST/NORTH AFRICA	3 sem. hrs.
42.472	HISTORY OF LABOR IN THE UNITED STATES	3 sem. hrs.
42.483	POPULAR CULTURE IN AMERICA	3 sem. hrs.
42.518	READINGS ON THE SOVIET UNION	3 sem. hrs.
	Selected readings on significant aspects of Soviet life. Varying themes and topics may be selected during different semesters.	
42.526	SELECTED TOPICS IN EUROPEAN IMPERIALISM SINCE 1870	3 sem. hrs.
	Colonial policy of the major European colonial powers in Africa, Asia, and Melanesia, its impact upon mother country and colonies, and the dissolution of colonial empires after World War II.	
42.530	HISTORY OF EUROPE: 1900-1923	3 sem. hrs.
	Internal and external policies of the European powers, the crisis leading to World War I, the military campaigns, the peace treaties of 1919, and the upheavals following the new distribution of power.	
42.532	HISTORY OF EUROPE: 1923-1945	3 sem. hrs.
	Political and economic crises of the 1920's; the rise of dictatorship and the political crisis leading to the Second World War; campaigns and diplomacy of the war; the condition in which it left the belligerents.	
42.534	THE EUROPEAN UNIFICATION MOVEMENT	3 sem. hrs.
	Efforts of the Western European nations to achieve economic, military, and political unity since 1945.	
42.536	STUDIES IN THE COLD WAR	3 sem. hrs.
	Causes, characteristics, and evolution of the Cold War from 1947 to the present.	
42.554	CONTEMPORARY FAR EASTERN CULTURES	3 sem. hrs.
	Selected Far Eastern Cultures including interdisciplinary study and a review of communication and the arts.	
42.556	TWENTIETH CENTURY MEXICO AND THE CARIBBEAN	3 sem. hrs.
	An examination of selected political, social, and economic problems of Mexico and the Caribbean area in recent decades with emphasis on the contention of forces for stability and radical change (respectively) in the region.	
42.580	UNITED STATES-LATIN AMERICAN RELATIONS	3 sem. hrs.
	Diplomatic exchanges between the United States and the twenty Hispanic American republics are examined together with economic, cultural, and social contacts. Factors that have contributed to a lack of hemispheric solidarity.	
42.581	UNITED STATES AND FAR EASTERN RELATIONS	3 sem. hrs.
	An analysis of the interest and concern of United States diplomacy with the Far East from the mid-nineteenth century to the present. Particular attention is given to changing relations with the Philippines, China, and Japan and to various attempted solutions to regional problems.	
42.582	THE UNITED STATES AS A WORLD POWER	3 sem. hrs.
	The emergence of the United States into the world order, its roles in the Councils of the world, its responsibilities in world leadership, its encouragement of democratic systems.	

42.585 COLONIAL AMERICAN INSTITUTIONS	3 sem. hrs.
The roles of religious, educational, philanthropic, political, and business institutions in America before 1790.	
42.586 AMERICAN URBAN HISTORY	3 sem. hrs.
The origins and consequences of the growth of urban centers upon American economic, political and social institutions.	
42.587 STUDIES IN PENNSYLVANIA HISTORY	3 sem. hrs.
Through a combination of lectures and research projects students investigate significant statewide, area or local aspects of Pennsylvania history. Specific chronological or topical emphases may be selected by the instructor.	
42.588 THE TRANS-MISSISSIPPI WEST	3 sem. hrs.
The origins, course, and consequences of American expansion across the Mississippi River.	
42.589 HISTORY SEMINAR	3 sem. hrs.
Lectures, reports and a research paper which a student may take in the area of special interest—i.e., American, European or Non-Western History.	
42.590 HISTORY SEMINAR	3 sem. hrs.
Continuation.	
42.591 HISTORY SEMINAR	3 sem. hrs.
Continuation.	
42.592 HISTORY READINGS	3 sem. hrs.
Readings, reports and discussion on a selected topic in American, European or Non-Western History which is tailored to the student's area of special interest.	
42.593 HISTORY READINGS	3 sem. hrs.
Continuation.	
42.594 HISTORY READINGS	3 sem. hrs.
Continuation.	
42.596 DIRECTED STUDY IN HISTORY	3-6 sem. hrs.
Meetings of student and instructor are to introduce the topic, guide the research, and help polish the product. Whenever possible, a one-on-one learning situation is to enable the instructor to guide the student to a maximal degree. The special interests of the student and instructor will determine content and procedure. Must have approval of department chairperson to enroll in this course.	
42.597 INDEPENDENT STUDY IN HISTORY	3-6 sem. hrs.
Same as 42.596.	
42.599 THESIS	6 sem. hrs.
Independent research and the preparation of a formal paper required in partial satisfaction of the requirements for the degree Master of Arts.	

COURSE DESCRIPTIONS

POLITICAL SCIENCE (Code 44)

<i>Note: Specialization in Political Science for the M.A. and M.Ed. degree is suspended temporarily.</i>	
44.405 THE DEVELOPMENT OF POLITICAL THOUGHT	3 sem. hrs.
Selected political theorists from Plato to Nietzsche are compared with contemporary American political theorists in an attempt to build bridges between traditional and contemporary theories and theorists. Included are: Plato and Strauss, Thucydides and Max Weber, Aristotle and Lipset, Augustine and Morgenthau, Machiavelli and Neustadt, Rousseau and Dewey, Aquinas and Maritain, Hobbes and Riker, Burke and Lippmann, Marx and C. Wright Mills, and John Stuart Mill and Christian Bay.	

44.409 AMERICAN POLITICAL THOUGHT

3 sem. hrs.

An analysis of the relationship of American political thought to contemporary political science by using traditional materials in an historical, chronological way but reworking them to show their relation and relevance to actions and institutions. Included are the main ideas of the leading political thinkers in America from the Colonial period to the present.

44.429 RACISM AND SEXISM IN AMERICAN POLITICS

3 sem. hrs.

An analysis of the role of Blacks in American politics, the Black Power movement, civil rights, and racial conflict.

44.437 PUBLIC ADMINISTRATION APPLICATIONS

3 sem. hrs.

An analysis of the method and techniques in the application of administrative organizational theory to the operations of governmental bureaucracies. Topics covered include: Program Planning Budgeting Systems (PPBS), Program Evaluation Review Technique (PERT), and Operations Research (OR).

44.438 CIVIL SERVICE EMPLOYMENT POLICIES AND PRACTICES

3 sem. hrs.

Public service as a career, the personnel needs of national, state, and local governments, civil service law, personnel systems, current problems.

44.440 THE PRESIDENT AND CONGRESS

3 sem. hrs.

Presidential and congressional politics; public policy-making roles; executive-legislative relationships; constitutional issues; problem areas and proposals for reform.

44.446 CONSTITUTIONAL LAW I

3 sem. hrs.

An analysis of the evolution, structure and function of the Supreme Court, concentrating on a case study approach of the Court's interpretations of the commerce and taxing powers and federal-state relationships.

44.447 CONSTITUTIONAL LAW II

3 sem. hrs.

A study of decisions of the Supreme Court as they are related to the individual and the government concentrating on: nationalization of the Bill of Rights; rights of persons accused of crimes; equal protection and voting rights.

44.448 JUDICIAL PROCESS

3 sem. hrs.

Judicial policy making is studied through systems theory, group theory, and judicial attitude and behavior.

44.452 STATE AND LOCAL GOVERNMENT AND POLITICS

3 sem. hrs.

A description and analysis of state and local legislatures, executives, and judiciaries; the myths and realities of state and local politics; intergovernmental relations; current policies and problems.

44.458 U.S. FOREIGN POLICY

3 sem. hrs.

An analysis of the substance, methods, and purposes of U.S. foreign policy including the determinants of our foreign policy, policy-making machinery, the implementation of our foreign policy, and contemporary foreign policy problems.

44.463 THE U.S.S.R. POLITICAL SYSTEM

3 sem. hrs.

The governmental process in the U.S.S.R.; the role of the Communist Party; the evolving ideology from Marx to the present; Soviet bloc politics.

44.464 GOVERNMENT AND POLITICS OF IRELAND I

3 sem. hrs.

A survey of historic, social, cultural, and religious developments in Ireland, with concentration on a study of the government and politics of Northern Ireland and the Irish Republic. Contemporary literature, drama, music, and art.

44.465 GOVERNMENT AND POLITICS OF IRELAND II

3 sem. hrs.

A study-tour of Northern Ireland and the Irish Republic including visits to museums, galleries, theaters and historic sites, and meetings with governmental and political leaders. Approximately half of the time spent in Dublin, the remainder on a bus trip through the Republic and Northern Ireland.

44.487 INTERNATIONAL LAW AND ORGANIZATIONS

3 sem. hrs.

The theoretical and practical implications of the legal and organizational efforts to regulate international relations without violent conflict; international law, the United Nations, the International Court of Justice, and several regional and functional organizations.

44.490 INDEPENDENT STUDY	1-6 sem. hrs.
44.491 READINGS IN GOVERNMENT AND POLITICS	3 sem. hrs.
Topics are selected through consultation between instructor and student. Designed for both group and individual study.	
44.492 SEMINAR IN GOVERNMENT AND POLITICS	3 sem. hrs.
Selected problems in government and politics are studied in an attempt to review and unify theories and methods of political science. Individual research projects.	
44.496 FIELD EXPERIENCE IN POLITICAL SCIENCE	1-6 sem. hrs.
Supervised individual or group activities, including internships of a non-classroom variety in applied areas of political science. <i>Prerequisite: Adequate theoretical background and consent of department.</i>	

COURSE DESCRIPTIONS

SOCIOLOGY (Code 45)

45.441 SOCIAL INDICATORS	3 sem. hrs.
This course is designed to reinforce and extend earlier learning in research techniques and methods by focusing upon systematic step-by-step understanding, analysis and preparation of social indicators at the Federal, State, and local levels of social policy planning and analysis. The emphasis is on developing student understanding of social indicators and their use in social planning within all levels of society.	
<i>Prerequisite: 45.211, 45.316, 45.460 or equivalent.</i>	
45.443 SOCIOLOGY OF DEVIANT BEHAVIOR	3 sem. hrs.
This course evaluates the presence and function of deviance in society; its various types, including mental illness and various types of crime and stigmatized behavior; and how it is handled therapeutically and legally: institutionalization and treatment. It attempts to provide a broad theoretical perspective as well as concrete examples of deviance in any society. The last third specifically examines current methods of rehabilitation and punishment.	
<i>Prerequisite: 45.211.</i>	
45.450 SOCIAL WORK PROCESSES III	3 sem. hrs.
An analysis and application of concepts from communication, information, and systems theory to social work practice.	
<i>Prerequisite: 45.211.</i>	
45.465 ADVANCED METHODS OF RURAL-URBAN ANALYSIS	3 sem. hrs.
Probability theory, sampling, and statistical inference applicable to rural-urban area analysis. Emphasis is placed on the problem involved in researching the changing social composition of rural-urban communities.	
<i>Prerequisite: 45.211.</i>	
45.467 POPULATION STUDY	3 sem. hrs.
A study of human population, its major theories, distributions, composition and other characteristics, changes and future developments of population; impacts of population problems on society as influenced by vital processes and migration patterns.	
<i>Prerequisite: 45.211.</i>	
45.468 SOCIAL SERVICE PLANNING	3 sem. hrs.
An advanced consideration of the social context of the theories and applications as well as the social effects of social planning, social policy and social services systems on people in service based post-industrial societies/at all levels of government.	
<i>Prerequisite: 45.211.</i>	
45.474 CONTEMPORARY ENVIRONMENTAL ISSUES	3 sem. hrs.
Some major human problems that lead to environmental deterioration, particularly water, air and noise pollution, energy and other resource depletion, and increasing population density.	
<i>Prerequisite: 45.211</i>	

45.478 INDUSTRIAL SOCIOLOGY

3 sem. hrs.

A sociological examination of work and the milieu of the worker; formal and informal work organizations, worker job satisfaction and dissatisfaction. The structure and organization of industrial and post-industrial societies; and the relationship between work organizations within communities and society.

Prerequisite: 45.211.

45.490 SOCIOLOGY OF AGING

3 sem. hrs.

A study of aging, its major theoretical themes, patterns of living, socio-psychological and cultural consequences of aging. Further, the course examines the contemporary issues, problems and programs of the aging.

Prerequisite: 45.211.

45.500 SOCIOLOGY OF MASS COMMUNICATION

3 sem. hrs.

This course is an in-depth discussion of: the cognitive and behavioral affects of mass media, especially television content, on audiences; the social structure of communications industry, particularly its influence on production, programming, news content, "newsworthiness" and "media events;" and the use of mass media by the U.S. at home and abroad. Students will critique the latest research articles in the field.

45.511 SOCIAL INSTITUTIONS

3 sem. hrs.

Sociological examination of major institutions in the U.S. cross-culturally compared with those in other societies. Specific institutions will be selected depending on the interest of the students and faculty.

45.513 ADOLESCENT IN AMERICAN SOCIETY

3 sem. hrs.

Study of the role of adolescents in contemporary U.S. society with special emphasis on the adolescent's social interactions in groups and institutions.

45.523 THE CONTEMPORARY AMERICAN COMMUNITY

3 sem. hrs.

An advanced examination of the social dynamics of community life, its institutions, organizations, and people within the context of the development of post industrial society.

45.525 CURRENT SOCIAL ISSUES

3 sem. hrs.

Analysis of current social issues and solutions offered to solve them. Issues and solutions are explored within the broad framework of the social sciences and specific framework of sociological and anthropological data.

COURSE DESCRIPTIONS**ANTHROPOLOGY**

(Code 46)

46.430 CULTURES AND PEOPLES OF OCEANIA

3 sem. hrs.

Types of aboriginal culture and the distribution of languages and physical types in the Pacific-Island world, with attention paid to archaeological evidence and migration routes from Malasia to Melanesia and Polynesia.

46.440 LANGUAGE & CULTURE

3 sem. hrs.

A study of the place of oral or non-oral language in human evolution and contemporary cultures. Topics discussed include dialectal variation, discourse analysis, multilingualism, language and cognition, and the role of language in education.

46.450 PEOPLES AND CULTURES OF SOUTH AMERICA

3 sem. hrs.

A survey introduction to the aboriginal, non-literate cultures of South America, including the ecological background, archaeology, and cultural patterns.

46.470 HISTORY OF ANTHROPOLOGICAL THOUGHT AND THEORY

3 sem. hrs.

This course surveys intensively the leading methods and theories of anthropological and ethnological interpretation, with special emphasis on the concept of culture and its practical application to modern problems.

46.481 CULTURAL DYNAMICS

3 sem. hrs.

An analysis of the development of culture from primates to the present. Processes of cultural change: "cultural evolution," diffusion, innovation and invention; role of the social environment;

relationship between human biology and cultural capacity with reference to recent studies of primates, sexology, linguistics, ecology and physical anthropology.

46.490 SOCIALIZATION OF THE CHILD 3 sem. hrs.

A comparative analysis of the socialization process as it occurs in selected non-western cultures. Life experience and adjustment of the individual through infancy, middle childhood and youth. Contrasting methods of introducing children to adult economic, social, biological behavior are described.

COURSE DESCRIPTIONS

PSYCHOLOGY
(Code 48)

48.525 INDIVIDUAL INTELLIGENCE TESTING 3 sem. hrs.

Analyzes the nature and rationale of various individual tests of intelligence. Provides skills and methods in administering tests, and in scoring, interpreting and reporting results.

48.576 THEORIES OF HUMAN LEARNING 3 sem. hrs.

Studies the historical and contemporary learning systems and models which yield principles for practical application. *Note: The following senior level undergraduate courses are also open to graduate students.*

48.406 PSYCHOLOGY SEMINAR 3 sem. hrs.

Provides for an advanced consideration of significant topics in Psychology. Requires reports and discussion of current research. Course may be repeated with change in topic.

Prerequisite: 21 hrs. in Psychology and consent of instructor.

48.416 ADOLESCENCE 3 sem. hrs.

Studies developmental, personal and social issues confronting adolescents as they emerge from childhood and strive for adulthood.

Prerequisite: 48.101.

48.436 THEORIES OF PERSONALITY 3 sem. hrs.

Provides a critical study of theories explaining development, structure and organization of personality. Considers personality from psychoanalytic, social, individual, self and learning points of view.

Prerequisite: 48.101.

48.451 LABORATORY TRAINING IN GROUP PROCESSES 3 sem. hrs.

Examines the theories of interpreting interaction, the development of self concepts and the formation and development of group cultures. Class size limited to 20 students.

Prerequisite: 48.101 and consent of instructor.

48.453 ORGANIZATIONAL PSYCHOLOGY 3 sem. hrs.

Describes the application of psychological theory and research to the study of industrial, business, profit and nonprofit service, military and governmental organizations. Emphasizes the interaction of individual perceptions, group dynamics and organizational climates and strategies to maximize the satisfaction and effectiveness of each component within and between complex organizations.

Prerequisites: 48.101, 251 and junior standing.

48.454 PSYCHOLOGICAL STUDY OF SOCIAL ISSUES 3 sem. hrs.

Reviews selected social issues (e.g., conflict, social change) studied in terms of intra-individual processes and of interactive processes between the individual and society. Emphasizes research findings and theory as to possible alternatives or solutions to current practices. Course may be repeated with change in topic.

Prerequisite: 48.101, junior standing or consent of instructor.

48.464 ADVANCED EXPERIMENTAL DESIGN 3 sem. hrs.

Presents an advanced consideration of the planning, conduct and evaluation of research in the behavioral and biological sciences, employing parametric and non-parametric statistics. Emphasizes inferential statistics, design, analysis, interpretation and computer utilization.

Prerequisites: 48.101, 260, 281, 282 or consent of instructor.

48.466 INDEPENDENT STUDY IN PSYCHOLOGY

3 sem. hrs.

Provides for the study of a topic via either review and research of technical psychological literature or empirical manipulation of variables in the field or laboratory under supervision of a Psychology faculty member resulting in a written report of its outcome.

Prerequisite: consent of instructor and departmental approval.

4.3 SCIENCES AND MATHEMATICS

BIOLOGY

(Code 50)

The Master of Science Degree (Thesis Optional)

Purpose: This program is intended to prepare the student either for admission to a research-oriented doctoral degree program in biology, or employment in a biology or health-oriented profession.

Prerequisite: An undergraduate degree in Biology equivalent to the Bachelor of Arts at Bloomsburg State College. Undergraduate deficiencies must be made up without credit toward the master's degree.

Requirements: Thesis Option—18 semester hours including thesis must be in courses numbered 500 or above. A limited number of courses in other areas may be included on approval of the department if they are clearly supportive of the biology major; Master's Thesis (50.593), 6 semester hours.

Requirements: Non-thesis Option—30 semester hours, 18 of which must be in courses numbered 500 or above. Courses must be selected from one of two plans (A or B). A limited number of courses in other areas may be included on approval of the department if they are clearly supportive of the Biology major.

Examinations: Examinations: A seminar presentation of the thesis or required paper (non-thesis option) and its results must be given during the term in which the degree is to be granted; a written and/or oral comprehensive examination administered by a committee from the department as part of the non-thesis option.

Foreign Language: Proficiency in a foreign language is strongly recommended.

Specialization in Biology for the Master of Education Degree

Purpose: This specialization is intended to enhance the competence of secondary school teachers of biology by extending their scholarship in content and method through formal courses and independent study and research.

Prerequisite: An undergraduate major in biology with Level I certification; background in mathematics and chemistry adequate for the courses and research to be undertaken. Undergraduate deficiencies must be made up, without credit toward the degree, prior to departmental recommendation for candidacy.

Required: Biology 50.591 or 50.592 to fulfill the research requirement. Also, 60.501 and 60.591.

Elective: Courses are to be chosen with the adviser's approval. 65.566 is an acceptable elective. A minimum of 18 semester hours must be in courses numbered 500 or above.

Examination: A seminar presentation of the thesis or directed study and its results; a written and/or comprehensive examination may also be required.

COURSE DESCRIPTIONS

50.411 RADIATION BIOLOGY

3 sem. hrs.

Effects of radiation on living organisms; nuclear structure; fundamental properties of radiation; physical, chemical, and genetic effects on plants and animals from cells to whole organisms; application of radio-chemicals in biological studies. Minimum of 4 hours/week including laboratory.

Prerequisite: 50.332, 52.232, 53.141, or consent of instructor.

50.431 EVOLUTION

3 sem. hrs.

Study of major problems of the theory of evolution and contributions toward their solutions made by genetics, paleontology, systematics, and ecology. 3 hours/week lecture.

Prerequisite: 50.332.

50.441 CYTOLOGY AND CYTOGENETICS	3 sem. hrs.
Structure and function of cytoplasmic and nuclear organelles of cells. Laboratory studies include techniques for cell, chromosome, and tissue preparation. Minimum of 4 hours/week including laboratory.	
<i>Prerequisites: 50.332 or 50.333; 52.211 or 52.231 or consent of instructor.</i>	
50.454 ETHOLOGY	3 sem. hrs.
Description and classification of behavior; its evolution and biological function. Mechanisms underlying behavior, especially species—typical behavior, are emphasized. Minimum of 5 hours/week including laboratory.	
<i>Prerequisites: 50.210 and 371 or consent of instructor.</i>	
50.455 ENVIRONMENTAL MICROBIOLOGY	3 sem. hrs.
Practical application of knowledge of micro-organisms; their effects on our environment; methods of control; sanitation regulations and testing procedures.	
<i>Prerequisite: 50.341 or consent of instructor.</i>	
50.457 ENTOMOLOGY	3 sem. hrs.
Study of the anatomical features of insects which enable the student to properly classify insects as to order, family, genera, and species. A technique course providing the student opportunity to collect, mount, and properly display insects for study. Three month collecting period, May to August, and 3-week lab for study of gross morphology and identification. Two hours lecture, 3 hours laboratory per week. Equivalent to a minimum of five hours/week including laboratory.	
<i>Prerequisite: 50.210 or consent of instructor.</i>	
50.459 ORNITHOLOGY	3 sem. hrs.
General biology of birds, and the study of bird identification in the field of song and sight. Study of birds of this region in relation of migration, time of arrival and nesting. Minimum of 5 hours/week including laboratory.	
<i>Prerequisite: 50.102 or 50.210.</i>	
50.462 PLANT ANATOMY	3 sem. hrs.
Outlines recent concepts of plant anatomy and historical consideration of classical researchers. Reviews structure, function, growth and morphogenesis of the vascular plants. Addresses composition and growth of meristems and the phenomena of subsequent tissue differentiation to increase appreciation of development events. Describes anatomical organization by developmental and comparative methods in order to explain important cell, tissue and organ relationships. Two hours lecture, 3 hours laboratory per week.	
<i>Prerequisite: 50.220.</i>	
50.463 BIOLOGICAL PHOTOGRAPHIC TECHNIQUES	3 sem. hrs.
Theory and practice of photography as applied to biology, including negative and print making, gross specimen photography, copying, transparencies, filmstrips, auto-radiography, nature work in closeups, photo-micrography, thesis illustrations, and other special techniques. Minimum 5 hours/week. May require evening hours.	
50.472 CELL PHYSIOLOGY	3 sem. hrs.
Application of physical and chemical principles of cellular processes; biochemistry of cellular constituents; physicochemical environment; bio-energetics; intermediate metabolism. Three hours lecture/week.	
<i>Prerequisites: 12 hours of Biology and Chemistry 52.211 or 52.231; or consent of instructor.</i>	
50.481-489 ADVANCED SPECIAL TOPICS, BIOLOGY/ALLIED HEALTH SCIENCES	3 sem. hrs.
Presents an area of biology or allied health which requires the student have some background in biology.	
<i>Prerequisite: Determined by the instructor.</i>	
50.511 SYSTEMATIC ZOOLOGY	3 sem. hrs.
Study of the diversity of the animal world and the methods and principles used to examine this diversity. Minimum of 5 hours/week including laboratory.	
50.521 SYSTEMATIC BOTANY	3 sem. hrs.
Morphology, taxonomy, and geographical distribution of vascular plants. Minimum of 5 hours/week including laboratory.	

50.531 DEVELOPMENTAL BIOLOGY

3 sem. hrs.

Study of progressive changes or transformations which occur during the existence of various plants and animals. Morphogenesis, differentiation, metabolism, and genetics control are considered. Experimental studies in the laboratory utilize living material obtained from local region and living cells grown in the laboratory. Minimum of 4 hours/week including laboratory.

50.532 BIOCHEMICAL GENETICS

3 sem. hrs.

The study of macromolecular complexes, protein synthesis and the regulation of cellular activity. Three hours lecture/week.

50.551 CONSERVATION OF BIOLOGICAL RESOURCES

3 sem. hrs.

Emphasis is on the theory and practice of environmental conservation of biological resources and on applied ecology. Field trips will be made to observe practices of wildlife, forest, and soil conservation. Minimum of 5 hours/week including laboratory.

50.552 LIMNOLOGY

3 sem. hrs.

Chemical and physical aspects of lakes, ponds, and streams, and of the nature of their biota. Laboratory and field investigations will be included. Minimum of 5 hours/week including laboratory.

50.553 ANIMAL ECOLOGY

3 sem. hrs.

Animal environmental relationships considered at the levels of individuals, species, populations, the distribution and the role of animals in communities and ecosystems. Emphasis placed on population ecology. Laboratory and field studies include investigation of physical and biotic aspects of the environment. Minimum of 5 hours/week including laboratory.

50.554 PLANT ECOLOGY

3 sem. hrs.

Study of interrelationships among plants and their environments. Physical and biological factors plus human influences involved in the distribution, associations, and successions of plant populations and communities are investigated. Minimum of 5 hours/week including laboratory.

50.555 (461) PARASITOLOGY

3 sem. hrs.

Structure, taxonomy, and life history of animal parasites with emphasis on those affecting man. Minimum of 5 hours/week including laboratory.

50.556 BIOLOGY OF THE ARTHROPODS

3 sem. hrs.

Study of arthropods including morphology, physiology, and embryology. In-depth study of the insect as representative of this phylum. Laboratory provides opportunity for dissection, preservation of tissues and experimentation. Minimum of 5 hours/week including laboratory.

50.558 ICHTHYOLOGY

3 sem. hrs.

Field and laboratory studies of the fishes of the area including their collection, taxonomy, anatomy, behavior, and ecological methods. Minimum of 5 hours/week including laboratory.

50.559 HERPETOLOGY

3 sem. hrs.

Amphibians and reptiles: structure, evolutionary history, speciation, geographic distribution, behavior. The laboratory is based on local faunas and on specimens available from local institutions. Techniques useful in collection, preserving, and identifying specimens. Minimum of 5 hours/week including laboratory.

50.561 VERTEBRATE MORPHOLOGY

3 sem. hrs.

A study of vertebrate morphology, including paleontological, systematic, morphogenetic, and phylogenetic aspects. Laboratory work is expected to embrace morphological and functional study of preserved and living specimens. Minimum of 5 hours/week including laboratory.

50.571 ENDOCRINOLOGY

3 sem. hrs.

The role of the endocrine glands in growth, metabolism, development, regulation, and reproduction of animals. Integrated activities of the nervous and endocrine systems are studied. Minimum of 5 hours/week including laboratory.

50.572 COMPARATIVE ANIMAL PHYSIOLOGY

3 sem. hrs.

A comparison of the general physiology of different groups of animals. Minimum of 5 hours/week including laboratory.

50.591 DIRECTED STUDY IN BIOLOGY

3 sem. hrs.

An opportunity to carry on an independent investigation in an area of biology in which the student has a particular interest. Such investigation is under the direction of a member of the

Department of Biology. The student is encouraged to identify a problem, employ an experimental design, and analyze data collected therefrom. Study of pertinent literature is a requirement of the course.

50.592 MASTER OF EDUCATION THESIS

3 or 6 sem. hrs.

Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of Master of Education in Biology.

50.593 MASTER OF SCIENCE THESIS

6 sem. hrs.

(See description of 50.592).

EARTH SCIENCE
(Code 51)

**Specialization in Earth Science
for the Master of Education Degree**

Purpose: This specialization in earth science is designed to increase the student's mastery of the discipline as a contribution to his/her background for effective teaching, and to enhance his/her academic expertise in research techniques, interpretation of data, and the general format of scientific writing.

Prerequisites: Each applicant shall have completed twelve (12) hours in Earth Science, which shall include Astronomy, Physical Geology, Meteorology, and Oceanography; background in Chemistry, Mathematics, and Physics adequate for the courses and research to be undertaken. Undergraduate deficiencies must be made up, without credit towards degree, prior to departmental recommendation for candidacy.

Requirements: A minimum of thirty (30) hours distributed as follows: 6-9 credits in Education; 51.501, 51.590 and 51.599.

Electives: Fifteen (15) elective credits selected with consent of adviser from offerings in Earth Science, Marine Science Consortium, or cognate areas.

Examination: Successful completion of a final comprehensive oral examination if required.

COURSE DESCRIPTIONS

51.451 FIELD TECHNIQUES IN EARTH SCIENCE

6 sem. hrs.

Intensive field and laboratory training in the use of equipment and techniques in the areas of geology, hydrology, and cartography. Field trips are integral and vital segments of the course.

51.453 OPERATION AND PROGRAMMING OF THE PLANETARIUM

3 sem. hrs.

Methods in use of the planetarium as a teaching and motivational device, supervised training and practice in the operation, use and maintenance of planetarium equipment.

51.461 MINERAL RESOURCES: A Study of Metallic and

Nonmetallic Mineral Deposits

3 sem. hrs.

A study of both metallic and nonmetallic mineral deposits, exploration, exploitation methods used, and environmental problems encountered.

Prerequisite: 51.361.

51.501 THE GEOLOGY OF PENNSYLVANIA

3 sem. hrs.

A comprehensive study of the stratigraphy, structure, and physiographic provinces of Pennsylvania, its glacial history, and its mineral resources, both metallic and nonmetallic.

51.510 REGIONAL GEOMORPHOLOGY OF THE UNITED STATES

3 sem. hrs.

This course represents a comprehensive study of various geomorphic regions in the United States. The parameters used for classifying the geomorphic provinces are discussed. Particular emphasis is placed upon the dominant geologic processes active within each province which are responsible for the topographic expression.

51.553 CELESTIAL ASTRONOMY

3 sem. hrs.

An advanced course in Astronomy designed to give the student the basic principles and contemporary concepts of the cosmos. Special topics on experimental and applied aspects of the field will be emphasized.

Prerequisites: 51.253 or approval by the instructor.

51.555 ADVANCED METEOROLOGY

3 sem. hrs.

An advanced course in meteorology designed to give the student a background in contemporary problems and practices of meteorology. Special topics on experimental and applied aspects of the field will be emphasized.

Prerequisite: 51.255 or equivalent.

51.559 COASTAL OCEANOGRAPHY

3 sem. hrs.

Study of such features of coastal environments as deltas, salt marshes, beaches, and continental shelves. Attention will be given to effects of natural and man induced changes on coastal areas. Various coastal models will be examined.

51.562 PETROLEUM GEOLOGY

3 sem. hrs.

An introduction to petroleum: its properties, origin, accumulation, exploration and exploitation.

51.570 HYDROGEOLOGY

3 sem. hrs.

After a brief review of surface hydrology, the theory of ground water flow and well mechanics is dealt with, and then the geologic aspects of ground water exploration and development are studied.

51.575 SOILS-THEIR PHYSICAL AND CHEMICAL PROPERTIES

3 sem. hrs.

The basic soil forming factors will be related to their physical properties such as soil texture, structure, and mineralogy. Chemical properties such as cation exchange capacity, aridity, and soil water chemistry will be discussed. Various soil classification systems will be examined.

51.590 CONTEMPORARY TOPICS IN EARTH SCIENCE

3 sem. hrs.

The study of a particular concept, problem, special topic, or new ideas, in any area of Earth Science. The topic will be chosen through common interests of the instructor and each student.

51.599 INDEPENDENT RESEARCH

3 sem. hrs.

Independent directed research aimed toward studies of selected problems in earth science.

MARINE SCIENCE CONSORTIUM
(Code 55)

See Marine Science (Code 55).

CHEMISTRY
(Code 52)

**Specialization in Chemistry
for the Master of Education Degree**

Purpose: To expand and solidify the student's basic knowledge in chemistry; to broaden the student's awareness of the role of chemistry in contemporary living; to improve the student's ability in the laboratory and to acquaint him with new ideas for laboratory experiments; to acquaint the student with the literature of the field and to increase his/her ability to use it effectively in self education.

Prerequisites for Candidacy: The B.S., B.A. or B.S.Ed. degree with a major in chemistry or the equivalent and a level I teaching certificate. Undergraduate deficiencies must be made up without graduate credit prior to departmental recommendation for candidacy.

Required for the Degree: Thirty semester hours of which the following 18 hours are specified; 52.501, 52.502, 52.511, 52.592, 60.501, 60.591. The additional 12 semester hours shall be selected from the following electives: 52.441, 52.521, 52.522, 52.523, 54.480 or 55.531.

One of the following education courses may be substituted for one of the above electives: 60.511, 70.517, 60.550, 60.561, 48.511 or 48.576.

(For complete requirements see Sections 2.22 and 2.23).

COURSE DESCRIPTIONS

52.441 BIOCHEMISTRY

3 sem. hrs.

Chemistry of proteins, nucleic acids, lipids, carbohydrates; intermediary metabolism; introduction to enzyme chemistry. Three hours class/week.

Prerequisite: 52.232, 52.312 or concurrent.

52.501 ENVIRONMENTAL CHEMISTRY

4 sem. hrs.

Chemistry of the earth, air and water, with emphasis on the impact of human activities on each. Natural resources, environmental pollutants and chemical approaches to conservation are discussed. Laboratory experiments emphasize the methods of analysis of various substances in water, air and soils. Three hours lecture and 3 hours laboratory/week.

Prerequisite: One year each of college-level chemistry, physics and mathematics.

50.502 CHEMISTRY PROJECT LABORATORY

2 sem. hrs.

Methods and projects for innovative laboratory experiences in high school and middle school chemistry laboratories. Emphasis is placed on applications of standard laboratory procedures in project-oriented settings. Examples of lecture demonstrations are also shown. One hour lecture and 3 hours laboratory/week.

Prerequisite: One year each of college-level chemistry, physics and mathematics.

52.511 ESSENTIALS OF PHYSICAL CHEMISTRY

3 sem. hrs.

Physical chemical topics which are required for more advanced courses. Topics include the kinetic theory of gases, the structure of the solid state, properties of liquids and solutions, thermodynamics, kinetics and chemical bonding.

Prerequisite: One year each of college-level chemistry, physics and mathematics.

52.521 POLYMER CHEMISTRY

3 sem. hrs.

Chemistry of synthetic and natural macromolecules commonly used in today's society. Synthesis of polymeric materials, methods of characterizing polymers, solid and liquid state properties, and polymer technological applications are discussed.

Prerequisite: One year of organic chemistry and one semester of physical chemistry or 52.511.

52.522 CHEMICAL EVOLUTION AND THE ORIGINS OF LIFE

3 sem. hrs.

Current theories of chemical evolution from an interdisciplinary perspective. Theories of stellar evolution, nuclear synthesis, cosmic abundances of the elements and prebiotic syntheses of organic compounds are discussed. Arguments concerning the origins of life and exobiology based on biological, geological, astronomical, and physical chemical sources are reviewed.

Prerequisite: One year of organic chemistry and one semester of physical chemistry or 52.511.

52.523 THE CHEMISTRY OF FOODS

3 sem. hrs.

Chemistry of compounds which are required for maintenance of life. Chemical and physical properties of foods are discussed with particular emphasis on methods used to detect, quantify, and determine the molecular structure of primary nutrients. Food additives are also discussed.

Prerequisite: One year of organic chemistry and one semester of physical chemistry or 52.511.

52.592 MASTER'S PAPER IN CHEMISTRY

3 sem. hrs.

A formal paper on some aspect of chemistry based on library or laboratory study. This paper should represent the culmination of the individual student's graduate work.

Prerequisite: Admission to candidacy.

MATHEMATICS

(Code 53)

**Master of Education Degree in
Mathematics Education**

Purpose: To expand the scholarship and professional competence of teachers and supervisors of mathematics by solidifying basic knowledge in content area, becoming familiar with related literature and increasing the ability to use this information effectively in research, instruction and self-education.

Prerequisites: For elementary or middle school teachers or supervisors—18 semester hours in mathematics, approved by the graduate faculty.

For secondary or middle school teachers or supervisors—the equivalent of an undergraduate major in mathematics which must include at least 30 semester hours in mathematics.

Deficiencies are to be corrected without graduate credit.

Requirements: A minimum of thirty semester hours of graduate courses including 53.501, at least three semester hours from 53.502, 53.517, 53.531 or 53.541 and at least three semester hours from 53.575, 53.585 or 53.586.

Electives: Other mathematics electives may be selected from 53.411, 53.421, 53.422, 53.451, 53.461, 53.471, 53.472, 53.504, 53.510, 53.512, 53.570, 53.572, 53.590, 53.591 and 53.592. One additional education course may be selected from 60.511, 60.515, 60.550, 60.561, 48.511, and 48.576. No more than four 400 level courses (12 semester hours) may be applied to a degree program.

Examinations: Each student will be required to demonstrate his/her competence in mathematics education by taking a written and/or oral comprehensive examination given near the end of his/her program.

Thesis: A thesis (3-6 credits) is optional and consists of original research in mathematics or mathematics education.

Master's Paper: A departmental paper (3 credits) is optional and is an expository paper giving an in-depth survey of an area of current research in mathematics education.

COURSE DESCRIPTIONS

Senior Level Undergraduate Courses Open to Graduate Students

(For course descriptions, see Undergraduate Bulletin)

53.411	INTRODUCTION TO GROUP THEORY	3 sem. hrs.
53.421	ADVANCED CALCULUS	3 sem. hrs.
53.422	COMPLEX VARIABLES	3 sem. hrs.
53.451	INTRODUCTION TO TOPOLOGY	3 sem. hrs.
53.461	NUMBER THEORY	3 sem. hrs.
53.471	ELEMENTARY NUMERICAL ANALYSIS	3 sem. hrs.
53.472	MATRIX COMPUTATION	3 sem. hrs.
53.491	SPECIAL TOPICS IN MATHEMATICS	3 sem. hrs.

Graduate Level Courses

53.501	FOUNDATIONS OF MATHEMATICS EDUCATION	3 sem. hrs.
A review of broad goals and specific objectives for mathematics instruction and the psychology upon which one may base his/her instructional program. Special consideration will be given to the theories of psychologists such as Piaget, Dienes, Bruner, and Gagne as they pertain to mathematics learning.		

53.502	MODERN MATHEMATICS FOR THE ELEMENTARY SCHOOL TEACHER	3 sem. hrs.
The emphasis in this course is the study of the structure of selected topics from elementary and middle school mathematics. Modern methods for presenting elementary concepts will be introduced to develop more advanced topics appropriate for inclusion in the elementary/ middle school curriculum. The review of recent research concerned with the teaching of these topics is included.		

53.504	HISTORY OF MATHEMATICS	3 sem. hrs.
An historical summary of the development of mathematics from the Ancient Near East through modern mathematics including a study of related problems. Emphasis will be placed on the continuing change which takes place in mathematics and on the active role of mathematics and mathematicians in shaping culture.		

53.510	ABSTRACT ALGEBRA	3 sem. hrs.
A study of algebraic systems such as groups, rings and fields. The notion of a category will be introduced early so that each algebraic system can be studied in a universal way.		
53.512	LINEAR ALGEBRA	3 sem. hrs.
A study of vector spaces over fields, linear transformations, matrices systems of linear equations, inner product spaces, invariant subspaces, eigenvectors, canonical forms, and related topics.		

53.517 TOPICS IN ALGEBRA FOR TEACHERS

3 sem. hrs.

The emphasis in this course is the study of the structure of selected topics from middle and secondary school algebra. Modern methods of presenting elementary concepts are introduced to develop more advanced topics appropriate for inclusion in the public school curriculum. The review of recent research concerned with the teaching of algebra and a critical study of the more influential curriculum programs of both the past and present are included.

53.531 TOPICS IN GEOMETRY FOR TEACHERS

3 sem. hrs.

Includes a critical examination of topics currently taught in secondary geometry, with discussion of topics in geometry and topology relevant to high school courses.

53.541 STATISTICAL APPLICATIONS

3 sem. hrs.

An in-depth study of statistical procedures used in educational research designs. Procedures discussed include the use of correlation and regression analysis, t-tests, chi-square, analysis of variance, and the bi-nominal test.

53.570 COMPUTER SCIENCE

3 sem. hrs.

An introduction to programming language and computation on a digital computer. In addition, topics such as abstract machines, algorithms and unsolvability may be considered.

53.572 MATHEMATICAL OPTIMIZATION

3 sem. hrs.

An introduction to the process of mathematical modeling, with a wide variety of examples to be presented. Emphasis will be placed on linear programming and game theory to related optimization models. Extensive applications from the social, life and management sciences will be included. The computer will be used as a computational tool throughout the course.

53.575 COMPUTER APPLICATIONS FOR TEACHERS

3 sem. hrs.

A course designed specifically for teachers of academic disciplines where computer utilization is relevant. This course functions as a workshop, including direct interactive terminal experience with the computer. The purpose of this workshop is (1)to familiarize the participant with the computer and its application in education, and (2)to have each participant develop instructional units employing the use of the computer in his/her specific area of academic interest.

53.585 INSTRUCTIONAL TECHNIQUES FOR SPECIFIC MATHEMATICS OUTCOMES

3 sem. hrs.

This course is an in-depth study of the procedures used for teaching mathematical concepts, computational skills and the processes of problem solving, logic and proof and their relationships to recent curriculum developments. In a workshop setting, participants will prepare instructional materials related to the above outcomes for use in their own classroom.

53.586 INDIVIDUALIZED INSTRUCTION IN MATHEMATICS

3 sem. hrs.

This course will emphasize the design and strategy of individualizing instructional systems in school mathematics. As the *workshop* stresses the practical aspects of experience, students will develop, evaluate and adapt instructional materials for use in their own classrooms.

53.590 RESEARCH PAPER IN MATHEMATICS EDUCATION

3-6 sem. hrs.

53.591 MASTER'S PAPER IN MATHEMATICS EDUCATION

3 sem. hrs.

53.592 SPECIAL TOPICS

3 sem. hrs.

PHYSICS
(Code 54)

**Specialization in Physics
for the Master of Education Degree**

Purpose: To expand and solidify the student's basic knowledge in Physics; to provide opportunity to become familiar with the newly developed programs for secondary schools; and to acquaint him/her with the literature of his/her field and increase his/her ability to use it effectively in research and in self-education.

Prerequisites: An undergraduate teaching major in Physics or its equivalent.

Requirements: 1) At least 18 semester hours in Physics courses normally including the areas of Mechanics, Electricity and Magnetism, and Modern Physics. 2)A Research Option consisting of

either the preparation of a Thesis as in (a) below, or the preparation of a Master's Paper as in (b) below.

(a)65.599 Master's Research Paper on some aspect of science education, or 54.599 Physics Research.

(b)54.592 Master's Paper in Physics.

Elective: Additional credit in Education, Chemistry, and/or Physics, or (with approval of the Program Adviser) in related areas such as Mathematics or Earth & Space Science to provide a total of at least 30 semester hours.

COURSE DESCRIPTIONS

54.421 SOLID STATE PHYSICS

3 sem. hrs.

Physical properties of matter in the solid state. Basic quantum concepts, crystal structure, electrons in metals, electrical conductivity, semi-conductors, band theory, and the p-n junction. Dielectric and magnetic properties of matter.

54.422 THERMODYNAMICS

3 sem. hrs.

Concepts and principles of classical thermodynamics. Thermodynamics of simple systems. Introduction to kinetic theory and statistical thermodynamics.

54.450 INTRODUCTION TO QUANTUM MECHANICS

3 sem. hrs.

An introduction to the fundamentals of quantum and wave mechanics beginning with a review of quantum radiation theory and proceeding through the Schroedinger presentation. Treatment includes one dimensional potential function, the harmonic oscillator, and the hydrogen atom.

Prerequisites: Physics 54.311, 314; Mathematics 53.322.

54.480 HISTORY OF PHYSICAL SCIENCE

3 sem. hrs.

An account of the development of physical science from the time of Copernicus to the present with attention to the nature of scientific investigation, assumptions, constructs and models, and the interaction of science with other thinking.

54.501 MATHEMATICS FOR TEACHERS OF PHYSICAL SCIENCE

3 sem. hrs.

Basic mathematical techniques of physics and chemistry with applications appropriate to teachers of the physical sciences. Methods of trigonometry, calculus, and vectors at a level to follow first-year college mathematics.

54.510 ELEMENTS OF CLASSICAL MECHANICS AND WAVES

3 sem. hrs.

A review and extension of basic concepts and methods in the mechanics of particles and objects, wave motion, and kinetic theory.

54.511 ELEMENTS OF CLASSICAL ELECTRICITY AND OPTICS

3 sem. hrs.

A review and extension of basic concepts and methods in electricity and magnetism and optics.

54.512 ELEMENTS OF MODERN ATOMIC AND NUCLEAR PHYSICS

3 sem. hrs.

A review and application of the modern concepts of relativity, quanta, radiation, and wave mechanics to atomic and nuclear physics.

54.520 APPLIED ELECTRONICS

3 sem. hrs.

The construction and characteristics of electronic devices such as amplifiers, oscilloscopes, meters, and transducers and their use in the acquisition, processing, and display of scientific data. Theory integrated with laboratory experience.

54.530 MODERN ADVANCED LABORATORY

3 sem. hrs.

Laboratory work with modern instrumentation of intermediate sophistication in a variety of areas such as nuclear radiation, magnetic field effects, vacuum, mass spectroscopy, nuclear magnetic resonance, lasers, and interferometry.

54.540 CURRENT APPLICATIONS OF MODERN PHYSICS

3 sem. hrs.

Application of principles and methods of modern physics to selected current topics of significance and probable classroom interest. Examples: lasers and holography, nuclear energy, cosmology, and solid state semiconductors.

54.550 MATHEMATICAL METHODS OF THEORETICAL PHYSICS

3 sem. hrs.

Development and use of mathematical concepts and techniques appropriate to further study in graduate-level physics. Vector calculus, differential equations, complex variables, special functions. Fourier analysis, etc.

54.552 THEORETICAL PHYSICS FOR TEACHERS

3 sem. hrs.

Development of more sophisticated theoretical aspects of such basic areas of physics as electromagnetic radiation, mechanics, particles and waves, quantum mechanics, fields, etc.

Prerequisite: 54.550 or equivalent.

54.560 RECENT DEVELOPMENTS IN HIGH SCHOOL PHYSICS

3 sem. hrs.

A consideration of modern programs including PSSC Physics and Harvard Project Physics, covering course content, laboratory work, philosophy, and method of teaching.

54.561 RECENT DEVELOPMENTS IN JUNIOR HIGH SCHOOL SCIENCE

3 sem. hrs.

A consideration of modern programs including ISCS and IPS, covering course content, laboratory work, philosophy, and method of teaching.

54.570 INDEPENDENT STUDY

1-3 sem. hrs.

Individual investigation (laboratory or theoretical) of an area of special interest following a plan consistent with the resources of the Department and approved before registration by a supervising professor. Number of credits depends upon the magnitude of the study.

54.592 MASTER'S PAPER IN PHYSICS

3 sem. hrs.

An extended paper presenting, from a novel aspect, the results of a study in depth of a topic or area in physics. May include laboratory work. Pre-registration approval must be secured from a supervising professor.

54.599 PHYSICS RESEARCH

3-6 sem. hrs.

Experimental and/or theoretical research leading to a Thesis which shows new knowledge or original scholarship on the part of the student. Pre-registration approval must be secured from a supervising professor. Number of credits depends upon the complexity and magnitude of the project.

PHYSICAL SCIENCE

**Specialization in Physical Science
for the Master of Education Degree**

Purpose: To expand and solidify the student's basic knowledge in a combination of Physics, Chemistry, and related areas; to provide opportunity to become familiar with the newly developed programs for secondary schools; and to acquaint him/her with the literature in the field and increase the ability to use it effectively in research, instruction, and self- education.

Prerequisites: An undergraduate science emphasis which included at least one year each of Chemistry, Physics and Mathematics.

Requirements: 1)At least 18 semester hours in Chemistry and Physics courses with no less than 6 semester hours in each field. 2)A Research Option consisting of either the preparation of a Thesis as in (a) below, or the preparation of a Master's Paper as in (b) below.

(a)55.599 Master's Research Paper on some aspect of Physical Science Education, or 52.599 Chemical Research, or 54.599 Physics Research.

(b)52.592 Master's Paper in Chemistry or 54.592 Master's Paper in Physics.

Elective: Additional semester hours in Education, Chemistry, and/or Physics, (with approval of the Program Adviser) in related areas such as Mathematics or Earth & Space Science to provide a total of at least 30 semester hours.

COURSES

**MARINE SCIENCE
(Code 55)**

Courses in Marine Science are available during summer months at the Marine Science Consortium at Lewes, Del., and Wallops Island, Va. For further information contact Mr. Lavere McClure. Director of the Marine Science Consortium, Bloomsburg State College.

55.500 PROBLEMS IN MARINE SCIENCE**55.510 OCEANOGRAPHY I (In-Service Teachers)**

55.511 OCEANOGRAPHY II (In-Service Teachers)

55.520 MARINE MICROBIOLOGY

55.530 COASTAL SEDIMENTATION

55.540 ENVIRONMENTAL SCIENCE EDUCATION

55.570 RESEARCH CRUISE—BIOLOGY, GEOLOGY, POLLUTION

5. SCHOOL OF PROFESSIONAL STUDIES

5.1 EDUCATION

COURSE DESCRIPTIONS

EDUCATIONAL STUDIES AND SERVICES (Code 60)

60.451 PUPIL PERSONNEL SERVICES IN THE PUBLIC SCHOOL 3 sem. hrs.

A comprehensive view of pupil personnel services in elementary and secondary schools; school attendance, school health programs, pupil transportation, psychological services, guidance services.

60.501 MAJOR PHILOSOPHIES OF EDUCATION 3 sem. hrs.

Modern educational problems and trends interpreted in the light of philosophical viewpoints; study of primary sources of concepts and philosophies which have influenced and are influencing education.

60.502 SCHOOL AND SOCIETY 3 sem. hrs.

Effects on the school program of social class, family and community pressures and changing patterns and standards of life in our society. The course aims to foster understanding of these pressures and patterns so as to enable the teacher to work effectively in encouraging the good and reducing the harmful impacts of social forces in relationships of children.

60.503 HISTORY OF AMERICAN EDUCATIONAL THEORY 3 sem. hrs.

Historical foundations of American educational theory with emphasis on individuals and schools of thought which have influenced and are influencing education in America.

60.505 COMPARATIVE EDUCATION 3 sem. hrs.

Educational ideas and practices of various countries of the world are examined for their impact upon our culture and education. Particular attention is given to the relationship of European educational programs to the American philosophy and practice of public education.

60.511 CURRICULUM AND INSTRUCTIONAL DEVELOPMENT 3 sem. hrs.

Curriculum developments, K-12, which grow out of the changing role of education in American society.

60.512 SELECTION AND USE OF AUDIO-VISUAL MATERIALS IN EDUCATION 3 sem. hrs.

Advanced study of the role of media in the educative process. Includes the critical assessment of that role, the selection of equipment and materials for optimum utility, a review of contemporary literature in the field, and a production component which involves advanced work in television, transparencies, slide-tape, and computer-assisted instruction.

60.520 GUIDANCE AND COUNSELING FOR EXCEPTIONAL CHILDREN 3 sem. hrs.

A study of the needs of exceptional children in the public schools (including the academically talented); guidance and counseling techniques for teachers and guidance counselors in meeting those needs; guidance and counseling for exceptional children related to the total guidance counseling program.

60.530 GUIDANCE IN THE ELEMENTARY SCHOOLS 3 sem. hrs.

Concepts and techniques of the guidance process in the elementary school; behavioral and developmental problems; releasing creative capacities of children.

**60.533 MEASUREMENT AND EVALUATION IN
THE ELEMENTARY SCHOOL** 3 sem. hrs.

Construction, administration, and interpretation of group tests of intelligence, achievement, aptitude, and personality in elementary schools.

60.550 PROBLEMS IN GUIDANCE AND COUNSELING 3 sem. hrs.

Philosophy of guidance; history of the guidance movement; guidance needs of children and adolescents; methods of gathering data; nature of school records; interpretation of test results and inventories; use of occupational information and data; interviewing and counseling techniques.

60.551 TECHNIQUES IN COUNSELING 3 sem. hrs.

Theories, principles and practices of counseling; development and use of counseling materials such as test results, educational information and other pertinent materials.

60.552 ORGANIZATION AND SUPERVISION OF GUIDANCE 3 sem. hrs.

Types of guidance organizations used in schools and their effectiveness in providing for good guidance.

**60.561 MEASUREMENT AND EVALUATION IN
THE SECONDARY SCHOOL** 3 sem. hrs.

Construction, administration, and interpretation of group tests in intelligence, achievement, aptitude, and personality in secondary schools.

60.581 INDEPENDENT STUDY IN EDUCATION 1-6 sem. hrs.

Designed for teachers in public schools as an opportunity to pursue in-service projects in cooperation with a faculty adviser. The teacher submits a "learning contract" to an adviser designated by the department chairperson. The contract details the academic goals and includes a description of the project in its relation to the goals, a reading list, the proposed credit, and a description of a proposal for a final report. Permission to register for the course is granted upon approval of the contract. Evaluation is based on the written report and an examination by a committee appointed by the adviser and/or department chairperson. Students may register at any suitable time; the duration of the experience is flexible.

60.583 SEMINAR IN EDUCATION 1-6 sem. hrs.

Designed to provide opportunity for a group of teachers engaged in a common in-service project to use the resources of the college and its faculty in connection with the project. A "learning contract" similar to that of 60.581 is submitted by the group as a basis for permission to register. Papers related to aspects of the project and to the literature designated in the contract are presented by the members for discussion and criticism in seminar meetings held under direction of a faculty member. Evaluation is based upon the seminar reports and a final comprehensive written report by the student.

60.591 FOUNDATIONS OF EDUCATIONAL RESEARCH 3 sem. hrs.

Methods and techniques used in educational research; development and interpretation of statistical data. Application to professional problems.

ELEMENTARY AND EARLY CHILDHOOD EDUCATION

**Specialization in Elementary Education for the
Master of Education Degree**

Purpose: This program is intended to enhance the professional competence of the individual as a teacher and leader through integrated learning experiences in study of the child, the curriculum, current practice, and the teacher's academic field.

Prerequisite: Instructor Level I certification for teaching in the elementary school.

Required: Education 60.501, 60.591; Master's Research Paper or a departmental paper in Elementary Education; six to twelve semester hours in courses pertinent to a professional specialization or in an academic discipline. (The general degree requirements are stated in Section 2.23)

Electives: Electives to complete the minimum degree program may be selected with approval of the adviser from several departments.

**Master of Science Degree with a
Curriculum in Early Childhood Education**

Purpose: This program is intended to enhance the professional competence of the individual as a teacher of young children through integrated learning experiences in the study of the young child, the curriculum, current practice, and the teacher of young children's areas of interest. Individuals not holding any type of certification can obtain the N-K-3 certificate. The program also has an option that can enable the teacher with a K-6 certification to obtain an N-K-3 (early childhood education) certification.

Required: Education 62.522, 62.523, 52.590, 62.591, 62.592, 62.593; Master's Research Paper or a departmental paper in early childhood education; six credits in foundation courses; and six credits in courses related to this professional specialization. N-K-3 certification will be granted to those students who complete 36 semester hours of graduate study of which six hours of graduate work was of a field experience/practicum nature, or a comprehensive task or project. Students selecting to seek N-K-3 certification are required to complete 62.594. Practicum in Early Childhood Education.

Elective: Electives to complete the minimum degree program or the degree program with the N-K-3 certification may be selected with approval of adviser from several departments.

Examinations: A comprehensive written and oral examination will be given to each early childhood graduate student seeking admission to candidacy.

COURSE DESCRIPTIONS

**ELEMENTARY AND EARLY CHILDHOOD EDUCATION
(Code 62)**

62.410 WORKSHOP IN PRESCHOOL EDUCATION

1-6 sem. hrs.

Designed for both teachers in-service and upper-level undergraduates. Study of selected areas in early childhood education. Individual or group study of subjects of interest or concern in teaching.

62.506 URBAN EDUCATION FOR THE DISADVANTAGED

3 sem. hrs.

Designed to increase awareness of problems of the urban educational system. The course emphasizes a growth of sensitivity to the disadvantaged youngster, in-depth examination of current research findings in each area studied, teaching strategies and resources, and approaches to resolve major problems. Discussion of polarization on critical problem areas.

62.507 USING NEWSPAPERS IN THE CLASSROOM

3 sem. hrs.

An activity centered course which provides the teacher with an orientation to the use of the newspaper in various subject areas. Opportunities for the development of learning experiences will be provided.

62.514 HOME, SCHOOL, AND COMMUNITY RELATIONS

3 sem. hrs.

An introductory course in public relations, with special reference to elementary school, in which a philosophy of partnership between home, school and community is developed and principles, attitudes and techniques to encourage community sharing in the planning of and assuming responsibility for good schools are considered.

**62.520 BRITISH INFANT SCHOOL EDUCATION
AND THE INTEGRATED DAY**

3 sem. hrs.

A course designed primarily for elementary education students with emphasis on the philosophy, composition, and daily routine of headmasters and assistants, teachers and auxiliary personnel, and pupils and their parents. In addition, family grouping and the integrated day methodology will be stressed as research findings and recommendations of the Plowden Report concerning education in England. And finally, the implications and applications of the British program in the United States will be explored and plans for implementation of adaptable activities and planning will be undertaken.

62.521 ELEMENTARY SCHOOL CURRICULUM

3 sem. hrs.

Problems related to development, experimentation, and improvement of curriculum practices in the elementary school.

62.522 CURRICULUM TRENDS IN EARLY CHILDHOOD EDUCATION 3 sem. hrs.
 Changing goals and the developing programs required to meet the needs of children who enter school with increased experiential background.

62.523 PRACTICES IN TEACHING THE YOUNG CHILD 3 sem. hrs.
 Emphasis is placed on developmental aspects of childhood as they relate to the school program.

**62.524 KNOWLEDGE AND THE CURRICULUM
IN THE ELEMENTARY SCHOOL** 3 sem. hrs.
 The place of knowledge in developing a curriculum. The emphasis is on content as it is influenced by innovative practices.

62.525 CURRENT PRACTICES IN ELEMENTARY SCHOOL SCIENCE 3 sem. hrs.
 Problems resulting from the increased interest of children in science and the need for science instruction in the elementary grades; methods and materials for nurturing these interests and for implementing science instruction within the limits of the interests of children are presented and evaluated.

62.527 SOCIAL STUDIES IN THE ELEMENTARY SCHOOL 3 sem. hrs.
 Contemporary trends and current research in the disciplines of the social sciences as a basis for development of a conceptual framework for a social studies program.

62.528 LANGUAGE ARTS IN THE MODERN SCHOOL 3 sem. hrs.
 Problems related to instruction in various aspects of the language arts; the place of the language arts in the curriculum; current research and its practical application.

62.529 LITERATURE FOR CHILDREN IN THE ELEMENTARY GRADES 3 sem. hrs.
 Survey of ways that children may encounter literature and methods that are effective in the encounter. Students become acquainted with children's books, work with children in a story-telling experience, discover ways other than through reading by which children may experience literature.

**62.530 AWARENESS OF ENVIRONMENTAL EDUCATION
PROBLEMS FOR THE ELEMENTARY SCHOOL** 3 sem. hrs.
 Designed to help the classroom teacher organize environmental education activities. Areas of content; problem solving activities; material sources; the use of resources; curriculum building; development of an awareness of environmental problems and possible solutions to them. Camping and a fee are required.

**62.531 ENVIRONMENTAL EDUCATION AWARENESS
ACTIVITIES AND MATERIALS FOR THE
ELEMENTARY SCHOOL** 1-3 sem. hrs.
 An opportunity for students to broaden their experiences in environmental education. Camping and a camp fee are required.
Prerequisite: 62.530.

62.533 VALUES CLARIFICATION IN THE ELEMENTARY SCHOOL 3 sem. hrs.
 A course designed primarily for elementary education students in which the emphasis is on the philosophy and composition of values clarification as it applies to the elementary school child. Practical and theoretical aspects will be stressed as well as techniques for helping children begin to build a value system by which they can live. Emphasis will be placed on methods which aid the teacher in becoming aware of the emotional needs of children, humanizing of the education process, and improvement of working/learning relationships with others.

62.534 CREATIVITY FOR TEACHERS 3 sem. hrs.
 Intended to help teachers to become more creative in their approaches to their students and subject matter. Emphasis is on understanding creative process, recognizing the creative child, and development of the creative potential of student and teacher.

62.539 CURRENT TOPICS IN ELEMENTARY EDUCATION 3 sem. hrs.
 An investigation of current thinking and research in aspects of elementary education.

62.581 INDEPENDENT STUDY ELEMENTARY EDUCATION 1-6 sem. hrs.
 Comparable to 60.581.

62.583 SEMINAR IN ELEMENTARY EDUCATION 1-6 sem. hrs.
 Comparable to 60.583.

62.590 CURRENT RESEARCH AND DEVELOPMENT IN EARLY CHILDHOOD EDUCATION

3 sem. hrs.

Recent literature and experimental work in the field of early childhood education, pre-school, kindergarten, primary. Characteristics of the learner, learning environment, learning materials, and innovative programs.

62.591 LEARNING AND DEVELOPMENT OF THE YOUNG CHILD

3 sem. hrs.

A survey of child development and its relationship to the early school years. The development of the young child from ages two through eight.

62.592 IDENTIFICATION AND PRESCRIPTION OF THE NEEDS OF YOUNG CHILDREN

3 sem. hrs.

The identification and prescription of the physical, emotional, social, and mental needs of young children.

62.593 ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL PROGRAMS FOR YOUNG CHILDREN

3 sem. hrs.

The study of various psychological and developmental approaches to early childhood education. The course considers the selection of personnel, evaluative techniques, and appropriate curriculum materials.

62.594 PRACTICUM IN EARLY CHILDHOOD EDUCATION

6 sem. hrs.

An individually prescribed course of study and activity based on (but not limited to) previous experience and academic achievement. Consent of department chairperson required.

62.595 INDIVIDUALIZED INSTRUCTION—PRINCIPLES AND PRACTICES FOR THE CLASSROOM

3 sem. hrs.

An analysis of practices, principles, and procedures for individualizing instruction. Experiences include procedures for adapting conventional instructional modes to individualized settings.

62.599 MASTER'S RESEARCH PAPER

3 sem. hrs.

Student demonstrates ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern to him/her. The problem area selected for the research project must be related to the curriculum which the student is pursuing.

READING

(Code 63)

**Specialization in Reading for the
Master of Education Degree.**

(Requirements for Certification in Reading can be obtained from Dr. Edward Pootay.)

Purpose: This program is intended to prepare experienced teachers to become reading supervisors or specialists, through learning experiences in diagnostic and remedial techniques, insights in psychology of learning, means of stimulating enjoyment of reading, training in supervision procedures, and clinical practice.

Prerequisites: Level I teacher certification; a basic course in teaching of reading.

Required: Departmental Paper.

Elective: Courses may be elected from other disciplines than Reading(63) with selection of these electives dependent upon the needs and educational backgrounds of the student.

Examination: A comprehensive written and/or oral examination is a graduation requirement in this program.

COURSE DESCRIPTIONS**63.540 PROBLEMS IN THE TEACHING OF READING**

3 sem. hrs.

Trends in reading instruction; development of competence in the use of different approaches to the solution of reading problems.

63.541 PRESCRIPTION FOR AND IDENTIFICATION—DIAGNOSIS OF REMEDIAL READING DIFFICULTIES

3 sem. hrs.

Diagnostic and remedial procedures emphasizing both standardized and informal techniques; analysis of extreme reading disabilities; preparation of a case study; stress of corrective and

remedial procedures and a working knowledge of how to write prescriptions for clients with reading problems.

63.542 PSYCHOLOGICAL ASPECTS OF READING 3 sem. hrs.

Psychological foundations of learning theories; their relationship to reading; their subsequent effect on reading achievement.

63.543 READING CLINIC I 3 sem. hrs.

Clinical experience in the diagnosis and remediation of reading and/or learning disabilities; diagnosis, development, administration, and evaluation of individual programs; case studies.

Prerequisites: Six hours selected from 63.541; 63.548; 63.542 and consent of director.

63.544 READING CLINIC II 3 sem. hrs.

Clinical experience in the development of reading skills and comprehension with persons who may or may not have remedial and/or learning disabilities. Combined with 63.543 gives experience with all levels. Continued evaluation of individual programs; case studies.

Prerequisites: Six hours selected from 63.541, 63.542, 63.548 and consent of director.

63.545 ORGANIZATION, ADMINISTRATION AND SUPERVISION OF READING PROGRAMS (K-12) 3 sem. hrs.

A course for the reading personnel, specialists, supervisors and administrators who will or may become involved with the supervising and programming responsibilities of a reading program. A discussion of types of Federal and/or School Reading Programs as well as a summary of the requirements of ESEA Titles, and how to write a Title program are an integral part of this course.

63.546 READING IN THE CONTENT AREAS 3 sem. hrs.

Designed for teachers in grades 4 to 12. Procedures and materials presented in word perception, special reading and study skills, vocabulary development, dictionary skills, and library techniques.

63.547 SEMINAR IN READING 3 sem. hrs.

Independent work in the study of recent research in the field of reading as it is applied to the departmental paper. New curricula, materials, and procedures of teaching reading.

63.548 DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN RELATION TO READING 3 sem. hrs.

This course is designed for the Reading Specialist and/or Reading Supervisor. Language disorders as a factor in learning. Perceptual abilities, i.e., auditory and visual modalities for learning disabilities. Recent research in the area of learning disabilities.

63.549 TEACHING READING TO THE HEARING IMPAIRED/ LANGUAGE-HANDICAPPED CHILD 3 sem. hrs.

Principles, practices, methods, and materials of teaching reading to the hearing impaired/language handicapped; discussion, reading, clinic practices with clients and library research.

SECONDARY EDUCATION
(Code 65)

**Specialization for the
Supervisory Certificate (K-12)**

Purpose: This program is designed for the person with primary responsibility of supervising and directing the activities of professional and non-professional employees in given fields.

Prerequisites: (1)Concentration in area for which certification is sought. (2)At least five years of experience in the field for which certification is sought. (Valid certificate in the field.)

Required: A minimum of 15 semester hours of graduate courses from the following areas: (1)School Supervision; (2)Legal Implications of Budget Preparation; (3)Group Dynamics; (4)Research Techniques; (5)Curriculum Development.

COURSE DESCRIPTIONS

65.502 LABORATORY EXPERIENCES IN PHYSICS FOR SCIENCE TEACHERS 3 sem. hrs.

A laboratory oriented study of selected topics in classical and modern physics designed to acquaint general science or physical science teachers with a variety of common scientific apparatus

and add to their versatility in bringing timely and interesting ideas and applications into the classroom.

65.530 INSTRUCTIONAL DEVELOPMENT IN MIDDLE AND JUNIOR HIGH SCHOOLS

3 sem. hrs.

Inquiry into the role of early secondary education by analyzing historical trends, curricular patterns, instructional designs, and personnel structure of this organizational unit. Emphasis on teacher behavior, student values and attitudes, and instructional designs peculiar to the junior high, middle, and intermediate schools.

65.541 THE DEPARTMENT CHAIRPERSON: A WORKSHOP

1-3 sem. hrs.

The workshop gives department chairpersons and those aspiring to be department chairpersons an opportunity to investigate options of methods, strategies and materials in the role. Emphasis placed on human relations, organization, supervision, curriculum, and curriculum revision.

65.560 DEVELOPMENT OF THE SECONDARY SCHOOL CURRICULUM 3 sem hrs.

Problems related to development, experimentation, and improvement of curriculum practices in the secondary school.

65.564 FIELD EXPERIENCES IN GEOGRAPHY AND EARTH SCIENCE 3 sem. hrs.

An introduction to the geology and geography of Pennsylvania with special emphasis upon field recognition and interpretation. Field trips, laboratory exercises, collecting, and classification.

65.566 LABORATORY TEACHING METHODS IN BIOLOGY 3 sem. hrs.

Experience in development and use of laboratory exercises, particularly those involving experiments and the inquiry of investigative approach. Instruction and experience in technical methods useful in teaching secondary biology.

Prerequisite: Twelve semester hours in biology.

65.568 PROBLEMS OF TEACHING FOREIGN LANGUAGES 3 sem. hrs.

Problems involved in the teaching of foreign languages in the modern school. Examination of research concerning the teaching of foreign languages; techniques of using the language laboratory and other commercial materials available in the field.

65.571 EVALUATING TEACHING IN MIDDLE AND SECONDARY SCHOOLS

3 sem. hrs.

Improvement of instruction through self analysis. Micro-teaching techniques; planning dimensions; self-appraisal techniques. Designed for teachers, with special reference to the work of cooperating teachers.

65.576 SCHOOL LAW AND FINANCE

3 sem. hrs.

Consideration is given to the limitations established by local, state, and federal law related to the interactions of school personnel. Special attention to recent changes resulting from judicial decisions. Fiscal control of education with emphasis on local budgetary problems is a major objective.

65.577 EDUCATIONAL RESEARCH FOR SUPERVISION

3 sem hrs.

Consideration is given to the development of ability to read and interpret educational research and apply it to a school situation. Conclusions concerning curriculum content and teaching strategies designed for the improvement of the educational process are emphasized.

65.578 GROUP PROCESSES IN SUPERVISION

3 sem. hrs.

Emphasis is given to group processes, communication in the group and organizational goals related to educational supervision. The focus is on knowledge of and practice in laboratory experiences in group processes and applicability to supervision. These experiences are intended to provide opportunities for experimenting with and evaluating leadership skills and provide a means of promoting creativity and initiative.

65.579 SEMINAR IN SUPERVISION I

3 sem. hrs.

Through an examination of the objectives, techniques, and materials of staff supervision, this course defines the supervisory function directed toward the improvement of instruction. Emphasis is placed upon the interrelationships between the humanistic aspects of education and democratic administrative behavior. Roles of contemporary supervision with respect to educational quality assessment, inter-personal relations, and the catalytic role of the supervisor are studied.

65.581 INDEPENDENT STUDY IN SECONDARY EDUCATION	1-6 sem. hrs.
See 60.581.	
65.583 SEMINAR IN SECONDARY EDUCATION	1-6 sem. hrs.
See 60.583.	
65.584 CURRICULUM THEORY AND DESIGN	3 sem. hrs.
This is a competency-based course consisting of elements providing a base for the student in relevant theory associated with the activity of curriculum development. A review, critique, and evaluation of current theoretical positions, and design methodology are an integral part of the course.	
65.585 CURRICULUM AND INSTRUCTIONAL EVALUATION	3 sem. hrs.
Curriculum and Instructional Evaluation is a competency-based course consisting of elements providing a base for the student in current theory and practice in the evaluation of school curriculum and instruction. Reviews, critiques and application of current thinking and practice in curriculum evaluation are an integral part of the course.	
65.599 MASTER'S RESEARCH PAPER	3 sem. hrs.
Student demonstrates the ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern to him/her. The problem area selected for the research project must be related to the curriculum which the student is pursuing.	

5.2 SPECIAL EDUCATION **(Code 70)**

Specialization in Special Education for the Master of Education Degree

Purpose: This program is intended to improve the competence of the teacher of exceptional children, to develop potential for leadership, and to prepare for further graduate study in the field. **Prerequisites:** Applicants must hold, or be eligible for, a current Pennsylvania teaching certificate for Special Education—Level 1.

Program Options: Applicants may elect preparation for teaching the mentally retarded, teaching the learning disabled, or teaching those with behavior disorders.

Required Courses: Mental Retardation: 70.502, 70.515, 70.525, 70.526, 70.544, 70.591, 70.599—Master's Research Paper or Departmental Paper (optional)—or 36 semester hour program. Learning Disabilities: 70.505, 70.532, 70.544, or appropriate reading course, 70.560, 70.590, 70.599—Master's Research Paper or Departmental Paper (optional)—or 36 semester hour program.

Behavioral Disorders: 70.570, 70.571, 70.572, 70.599—Master's Research Paper or Departmental Paper (optional)—or 36 semester hour program.

Specialization in Exceptional Persons Master of Science Degree

Purpose: This program is designed for the professionals not in education who wish to expand their knowledge and develop new skills for working with the exceptional person.

Prerequisites: Applicants must possess an earned baccalaureate degree from an accredited college or university and must meet all entrance requirements as stated in the current Graduate Bulletin.

Program Options: Applicants will have the opportunity to select courses outside of special education, to acquire additional information and skills in his/her own discipline.

Required Courses: 70.516, 70.565 or 591, five of the following: 70.455, 70.490, 70.501, 70.502, 70.517, 70.552, 70.559, 70.560, 70.562, 70.570, 70.599 Master's Research Paper or Departmental Paper (optional)—or 36 semester hour program.

COURSE DESCRIPTIONS

70.455 LEARNING DISABILITIES	3 sem. hrs.
A study of the characteristics and symptoms of specific learning disorders. Students are introduced to diagnostic and educational procedures used with learning disorders. Emphasis is on perceptual and conceptual factors in the development of language skills. <i>(For individuals who have not had a previous course in Learning Disabilities.)</i>	

70.490 SPECIAL WORKSHOP

1-6 sem. hrs.

Temporary Special Workshop seminars designed to focus on contemporary trends, topics, and problems in the field of Special Education. Lecturers, resource speakers, team teaching, field experience and practicum, new media and related techniques. Usually are funded projects.

70.491 SPECIAL WORKSHOP

1-6 sem. hrs.

(Refer to description of 70.490.)

70.492 SPECIAL WORKSHOP

1-6 sem. hrs.

(Refer to description of 70.490.)

**70.501 ADMINISTRATION AND SUPERVISION OF EDUCATION
FOR EXCEPTIONAL CHILDREN**

3 sem. hrs.

Application of fundamental principles of school administration and supervision to the areas of exceptionality and to problems unique to each. School law, teacher recruitment, in-service education, organization and integration of special education and ancillary services, evaluation of special provisions and finance as these bear on special education.

70.502 MENTAL RETARDATION

3 sem. hrs.

Intensive review of research pertaining to etiology of mental retardation, classification systems, and of diagnosis. Includes study of brain injury, familial retardation, research on learning characteristics, and evaluation of psychological tests. Criteria distinguishing mental retardation from other problems.

70.505 SEMINAR IN LEARNING DISABILITIES

3 sem. hrs.

This course is designed to facilitate an in-depth study of the behavioral characteristics and cognitive development of children with specific learning disabilities. It is specifically intended for those graduate students seeking a Master's degree with concentrated emphasis in Learning Disabilities. Enrollment is limited to those who have the necessary prerequisites and with the approval of the instructor.

**70.515 CURRICULUM AND MATERIALS FOR THE EDUCABLE
MENTALLY RETARDED**

3 sem. hrs.

Problems-oriented course concerned with principles and procedures of curriculum and materials development and construction. Designed to further develop and/or refine the special education teacher's competence in developing adequate, meaningful curricular experiences for the retarded at various levels.

70.516 PSYCHOLOGY OF EXCEPTIONAL CHILDREN

3 sem. hrs.

Symptomatology, personality formation and developmental and therapeutic consideration for the exceptional child.

70.517 EDUCATION OF THE GIFTED CHILD

3 sem. hrs.

Principles and practices which are modifying school programs to conserve and develop to the optimum degree the capabilities of the more able children. A study is made of teaching techniques and devices used effectively in both the elementary and the secondary school.

**70.525 CURRICULUM AND MATERIALS FOR LOW FUNCTIONING
MENTALLY RETARDED**

3 sem. hrs.

Designed to give the student intensive study and understanding of the trainable mentally retarded child. Emphasis on curriculum development, methods, and materials to be used with the trainable mentally retarded child in school. Research; methods of diagnosis and differentiation; implications for training and psychological planning.

70.526 VOCATIONAL WORK STUDY PROGRAM

3 sem. hrs.

Investigation and analysis are concerned with manual skills at various developmental levels. Research criteria and information are applied to job performance and adjustment, and to the community, and to job opportunities. Experience is provided in job analysis for skills involved, and in surveying job adjustments of handicapped adults.

70.532 COMMUNICATION DISORDERS OF EXCEPTIONAL CHILDREN

3 sem. hrs.

Review of research and analysis of language and speech development in relation to intellectual development; cultural background and other influences; criteria and techniques for developing language and speech in the special class; role of speech correctionist and others to teachers.

70.544 DIAGNOSTIC AND REMEDIAL TECHNIQUES	3 sem. hrs.
Diagnostic and remedial techniques and instruments used with children in special education programs. Critical evaluation of applicability of each to the child in relation to causes and conditions of exceptionality. Development of skills in interpreting and writing case histories and reports, in selection and application of remedial techniques, and evaluation of progress.	
<i>Prerequisite: A course in Tests and Measurements, or its equivalent.</i>	
70.552 SPECIAL PROJECT	3 sem. hrs.
Designed to further student's own interest and competency in an area of Special Education for the exceptional child. Library research or individual projects involving service to the exceptional person may be agreed upon and conducted under supervision of a staff member.	
70.554 DISORDERS OF WRITTEN COMMUNICATION	3 sem. hrs.
This course is designed for graduate students with at least minimal background in the area of written language, i.e. decoding and encoding processes. Course content includes a review of the development and acquisition of reading, spelling and writing. In-depth study of specific disorders, etiological factors, developmental and remedial techniques and practices will be included. Specific topics for scholarly research papers will be determined according to individual needs, experience and interest. Students will be required to demonstrate proficiency in all aspects of written language.	
70.559 SEMINAR IN EDUCATION OF EXCEPTIONAL CHILDREN	3 sem. hrs.
Research oriented and devoted in its entirety to problems in the education of exceptional children. The problems may be theoretical or practical. Consideration is given to those which are of individual interest to the student.	
70.560 NEUROLOGICALLY IMPAIRED CHILD	3 sem. hrs.
Terminology necessary to interpret diagnostic reports; classroom techniques for managing brain-injured children; preparation to work with children with specific learning disabilities which are related to neurological dysfunction and concomitant behavior.	
70.562 PROBLEMS OF CHILDREN WITH IMPAIRED MOTOR DEVELOPMENT	3 sem. hrs.
This course is designed to give the students information and experience with the problem of children with educationally relevant motor disabilities. The course covers normal motor development; formal and informal assessment of motor skills and problems; developmental and corrective preschool and elementary school programs; conditions resulting in severe motor disabilities; self-care, academic, and psycho-social aspects of physical disability; pre-vocational and vocational adjustment of the physically handicapped; and current issues related to research and litigation.	
70.565 READING AND INTERPRETING RESEARCH IN SPECIAL EDUCATION	3 sem. hrs.
This course is designed to aid the student in reading, understanding, and evaluating the results of statistical and behavioral research carried out by others. Areas covered include a working knowledge of basic statistical terms, an introduction to the type of research questions which can be answered by various statistical procedures, a knowledge of the basic steps of hypothesis testing, an analysis and comparison of good and poor research designs, and the development of an ability to detect misuse of statistics.	
70.570 FOUNDATIONS OF BEHAVIOR DISORDERS	3 sem. hrs.
An information-based course covering the characteristics of children with behavior disorders, approaches to remediation, general principles of classroom management, simulated problem solving, ideal academic models for children with behavior disorders, research findings and sources of information.	
70.571 INTERVENTIONS WITH BEHAVIOR DISORDERED CHILDREN	3 sem. hrs.
A field-based experience where majors meet in class and are given assignments to perform in their classrooms. Observations are made and feedback is provided. Results of interventions are shared in group class sessions and strategies are multiplied for all.	
70.572 SEMINAR ON BEHAVIOR DISORDERS	3 sem. hrs.
A regularly scheduled seminar group composed of those who have completed the first two courses in the Master's Behavior Disorders sequence. The group will deal with reading new research and discussing implications for applications, as well as future directions, moral issues and more advanced systems of management and instruction.	

70.590 DIAGNOSTIC AND TEACHING PRACTICUM 3-6 sem. hrs.

Opportunity to work in a structured setting on a one-to-one and small group basis. Practicum is the culminating activity wherein the teacher will apply the knowledge previously acquired in academic courses through the interpretation of diagnostic reports, evaluating children's needs, planning and carrying out programs and making recommendations for the child's future educational program.

70.591 PRACTICUM IN TEACHING THE MENTALLY RETARDED 3 sem. hrs.

This practicum course is designed to facilitate in-service training for teachers of the mentally retarded who are currently certified. Students will select an area of primary interest to them; and, under closely supervised conditions (by the instructor), the project will be conducted as part of his/her regular professional assignment. Permission to register for the course must be obtained from the instructor assigned to supervise the practicum.

70.595 INTERNSHIP 3-6 sem. hrs.

Internship in Special Education. Supervision to take place in schools or educational situations under supervision of the local supervisor and graduate faculty.

70.599 MASTER'S RESEARCH PAPER 3-6 sem. hrs.

Opportunity to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern. The problem area selected for the research project must be related to the exceptional person.

5.3 COMMUNICATION DISORDERS **(Code 74)**

**Specialization in Communication Disorders for the
Master of Science Degree**

Purposes: The purposes of the graduate program in Communication Disorders are (1)to prepare clinicians in speech and language pathology and audiology for schools, hospitals and clinics and (2)to prepare teachers of the hearing impaired.

Students in Speech and Language Pathology and Audiology who wish to meet requirements for the Certificate of Clinical Competence of the American Speech and Hearing Association should refer to the Department's sheet of requirements.

Students in Education of the Hearing Impaired may satisfy the requirements for certification by the Council on Education of the Deaf.

Admission Requirements and Prerequisites: Admission to full-time graduate study is subject to an annual quota, with selection made on the basis of undergraduate Quality Point Average and the following prerequisites for the areas of study: (1)For Speech and Language Pathology—an undergraduate major in this field or the make-up of deficiencies including clinical training and practicum; (2)For Education of the Hearing Impaired—an undergraduate curriculum which included teacher certification together with courses constituting the equivalent of a minor in Communication Disorders. Deficiencies must be made up without graduate credit.

Required Courses: Master's Research Paper or Department Paper; courses and practicum to fulfill requirements for the desired credentials selected subject to the approval of the adviser.

Elective Courses: Elective courses may be chosen with approval of the adviser from categories 70,74, and 48.

COURSE DESCRIPTIONS

**74.403 INTRODUCTION TO MANUAL COMMUNICATION FOR
THE HEARING IMPAIRED** 3 sem. hrs.

Studies the basic sign language vocabulary and fingerspelling techniques used in communicating with hearing impaired individuals. Emphasis is placed on developing proper receptive and expressive skills—required for an effective communication process to occur.

74.452 ANATOMY OF SPEECH AND HEARING MECHANISMS 3 sem. hrs.

Embryology, anatomy, neurology, and physiology of the larynx and ear are studied. The actual processes involved in human speaking and hearing are explored. A cooperative lecture series is developed for the students by the medical staff at Geisinger Medical Center.

Prerequisite: 74.351.

74.460 PSYCHOLINGUISTICS

3 sem. hrs.

Language as a psychological phenomenon; nature and acquisition of meaning, and the learning of systems; influences of verbal and nonverbal antecedent conditions on both verbal and nonverbal learning. Descriptive models of language mediators in behavior.

Prerequisites: 74.251, 276.

74.467 APPLIED BEHAVIOR ANALYSIS IN SPEECH AND LANGUAGE THERAPY

3 sem. hrs.

Applications of the psychology of learning to communicative behavior and clinical problems. Current educational and therapeutic trends and practices.

Prerequisite: 74.351.

74.471 SEMINAR IN SPEECH PATHOLOGY

3 sem. hrs.

This course is designed to survey the most current diagnostic and clinical procedures available in speech-language pathology and to discuss the applicability of the procedures to the clinical populations being serviced by the seminar students. Advanced clinical practice will take place in the Preschool Language Nursery and in Satellite sites within the community.

74.472 MEASUREMENT OF HEARING LOSS

3 sem. hrs.

The anatomy and physiology of the hearing mechanisms are studied. Etiology of hearing losses, interpretation of audiometric evaluations and available rehabilitative procedures are discussed. Laboratory experience in the administration of clinical audiometric evaluations is provided.

Prerequisites: 74.276, 376.

74.504 INTERNSHIP IN SUPERVISION OF SPEECH AND HEARING PROGRAMS

3-6 sem. hrs.

Present practices and philosophies in public school are examined. Merits of existing programs are considered. Educational structures and national, state, and local requirements are reviewed. Research trends and advanced practices in the field are considered. Includes analyses of equipment materials, record-keeping procedures, and related materials.

74.505 SUPERVISION AND ADMINISTRATION OF SPEECH AND HEARING SERVICES

3 sem. hrs.

General principles of supervision are examined and professional personnel practices are explored.

74.510 OROFACIAL AND SPEECH DISORDERS

3 sem. hrs.

The course will concentrate on orofacial structural deficits and their effect on speech. Specific attention will be given to clefts of the prepalate and palatal and their sequelae on speech.

74.511 NEUROMUSCULAR SPEECH DISORDERS

3 sem. hrs.

Etiology, diagnosis, and treatment or organic factors are subjects of intensive study. Emphasis is focused on articulatory abnormalities of speech processes caused by cerebral palsy and cleft palate conditions. Implications of disorders for developmental age levels are considered.

74.512 ADULT APHASIA

3 sem. hrs.

The study of language disorders in brain injured adults. Among the areas of concentration are: the history of aphasia, the neurological basis for aphasia, symptomatology of aphasia, associated problems, intelligence and aphasia, the evaluation of language and non-language functions, and current rehabilitative procedures.

74.518 CHILD LANGUAGE DISABILITIES

3 sem. hrs.

A review of normal language acquisition with primary emphasis on the application of developmental information to the diagnosis and habilitation of language disorders in children.

74.532 HEARING AIDS AND AUDITORY TRAINING

3 sem. hrs.

Theoretical and clinical analyses of literature are evaluated in relation to educational and other rehabilitative measures available to individuals with serious organic and non-organic hearing problems. Study, interpretation, and evaluation of modern instruments and tests are included.

74.540 SEMINAR IN CURRENT CLINICAL PROCEDURES

3 sem. hrs.

This course reviews contemporary diagnostic and therapeutic procedures. The class participates in selecting the specific instruments for review and study.

74.541 STUTTERING	3 sem. hrs.
The development, diagnosis, and treatment of stuttering disorders with equal emphasis being placed upon academic understanding and clinical management.	
74.553 SPEECH PATHOLOGY PRACTICUM	6 sem. hrs.
Special clinical problems of clients are considered through advanced study and experience. Externships may be arranged in approved institutions or schools. Problem areas and student practicums must be approved by graduate adviser.	
74.554 CLINICAL PRACTICUM IN AUDIOLOGY	3 sem. hrs.
Hearing losses and deafness affecting the personal and socio-economic adjustment of individuals are evaluated and treated through supervised study and experience. Externships may be arranged in approved private and public institutions.	
74.555 CLINICAL PRACTICUM IN AUDIOLOGY	3 sem. hrs.
(See course description of 74.554.)	
74.560 INTERMEDIATE SPEECH AND LANGUAGE PRACTICUM IN EDUCATION OF THE HEARING IMPAIRED	3 sem. hrs.
This course provides an opportunity to work with hearing impaired children. The emphasis is speech and language remediation of hearing impaired individuals.	
74.561 VOICE DISORDERS	3 sem. hrs.
The diagnosis and clinical management of functional and organic voice disorders.	
74.562 RESEARCH IN SPEECH AND LANGUAGE PATHOLOGY	3 sem. hrs.
The application of clinical and non-clinical research literature to the solution of treatment problems encountered in the general practice of speech and language pathology.	
74.563 RESEARCH IN AUDIOLOGY	3 sem. hrs.
The application of clinical and non-clinical research literature to the solution of diagnostic and treatment problems encountered in the general practice of audiology.	
74.564 SPEECH FOR THE HEARING IMPAIRED	3 sem. hrs.
Study of the principles and techniques used in development and formation of the English speech sounds by the synthetic and analytic methods with special consideration given to the production, classification and transmission of speech sounds by these methods. Supervised demonstrations and practicums are an integral part of the course.	
74.565 PROBLEMS AND TRENDS IN TEACHING THE HEARING IMPAIRED	3 sem. hrs.
Current practices and trends in education and welfare of the hearing impaired. Concerned with psychology, social adjustment, educational achievement, political and social viewpoints, learning problems and vocational competence of hearing impaired. New techniques and methodologies.	
74.566 LANGUAGE FOR THE HEARING IMPAIRED	3 sem. hrs.
Study of the principles and techniques used in the development and correction of language for the hearing impaired. The student is made familiar with leading systems of language designed for the hearing impaired and proficient in the step-by-step development of at least one language system. Supervised demonstrations and practicums are an integral part of the course.	
74.568 COMMUNICATION FOR THE HEARING IMPAIRED	3 sem. hrs.
Study of the expressive and receptive methods of communication used by the hearing impaired with emphasis on new techniques and methodologies.	
74.569 CURRICULAR SUBJECTS FOR THE HEARING IMPAIRED	3 sem. hrs.
Practices, content and methods of teaching school subjects to the hearing impaired are examined with emphasis on content and methods rather than theory.	
74.570 PRACTICUM WITH THE HEARING IMPAIRED	6 sem. hrs.
Hearing losses affecting the communication, educational and vocational adjustment of individuals are evaluated through supervised observation, clinical practice and practicum experience. Students are assigned to approved private and public programs for the hearing impaired where they work with selected professionals in communication disorders, following the same schedules and assuming responsibilities similar to those of professionals. Arrangements relating to student interest must be approved by program adviser.	

74.571 SEMINAR IN COMMUNICATION DISORDERS 3 sem. hrs.

Selected theoretical and clinical areas of communication disorders and related disciplines. Selected areas may include clinical and research topics pertaining to student needs.

74.572 SEMINAR IN AUDIOLOGY: SPECIAL PROBLEMS 3 sem. hrs.

Analysis, interpretation, and study are made of selected problems in audiology and related disciplines that may include education, psychology, otology, rehabilitation, and other fields.

**74.573 SEMINAR IN AUDIOLOGY: INDUSTRIAL AND PUBLIC
HEALTH AUDIOLOGY** 3 sem. hrs.

Problems and programs of hearing conservation in public institutions and industries are examined with special emphasis on legislation and medico-legal questions. The role and function of the public health and industrial audiologist is examined.

**74.574 SEMINAR IN AUDIOLOGY: AUDITORY PROBLEMS
IN CHILDREN** 3 sem. hrs.

Congenital and acquired hearing impairment in children is examined with special emphasis on problems of differential diagnosis. Educational and social implication of hearing impairment in children is discussed in conjunction with appropriate rehabilitative procedures.

**74.576 SEMINAR IN AUDIOLOGY: THEORETICAL AND
CLINICAL MASKING** 3 sem. hrs.

The neurophysiological and acoustic basis of problems of masking in auditory measurement are explored and training is offered in clinical masking procedures.

74.580 INDEPENDENT STUDY AND RESEARCH 3 sem. hrs.

This course permits students to work, under close faculty guidance, on library study of specified areas or on individual research projects when particular needs cannot be met by registration in regularly scheduled courses.

74.581 INDEPENDENT STUDY AND RESEARCH 3 sem. hrs.
(Refer to description for 74.580).**74.582 INDEPENDENT STUDY AND RESEARCH** 3 sem. hrs.
(Refer to description for 74.580).**74.584 RESEARCH IN HEARING IMPAIRMENT** 3 sem. hrs.**74.590 PROBLEMS AND SPECIAL TOPICS IN EDUCATION AND
HABILITATION OF THE HEARING IMPAIRED** 1-6 sem. hrs.**74.599 MASTER'S THESIS** 3-6 sem. hrs.

6. SCHOOL OF BUSINESS

6.1 SPECIALIZATION IN BUSINESS EDUCATION FOR THE MASTER OF EDUCATION DEGREE

Purpose: This specialization is intended to contribute to the professional maturation of the teacher of business subjects in secondary schools.

Prerequisite: Level I certification to teach business subjects.

Required: Ed Studies 60.501, 60.591; Master's Research Paper (65.599) or Business Seminar (90.581); Business 90.561; and two additional courses (6 sem. hrs.) from the Specialized Subject Matter area as listed.

Electives: Graduate courses from categories 90, 91, 92, 93, and 94 should be elected with approval of the adviser. Courses should be chosen that will extend and reinforce the student's knowledge, techniques and skills and provide critical understanding of current research in business education. The amount of elective credit may be determined from the comprehensive plan for the degree. (Section 2.23).

COURSE DESCRIPTIONS**BUSINESS EDUCATION**

(Code 90)

90.533 BUSINESS STATISTICS 3 sem. hrs.
 Principles applicable to, and procedures used in, collecting, tabulating, analyzing, presenting, and interpreting business and economic data. Measures of central tendency; sampling; time series; correlation; and index numbers.

90.534 PRINCIPLES OF INSURANCE 3 sem. hrs.
 Principles applicable to and uses of life, marine, casualty, and fire insurance contracts; basic legal concepts pertaining to insurance contracts and the responsibility of underwriters.

90.551 IMPROVEMENT OF INSTRUCTION IN BUSINESS SKILL SUBJECTS 3 sem. hrs.
 Current practices in the teaching of perceptual motor skill subjects are studied, with particular emphasis on the psychology of perceptual motor learning. Attention is given to development of research-based teaching strategies and instructional materials, evaluative techniques, development of standards, selection of equipment, and planning courses of study.

90.552 IMPROVEMENT OF INSTRUCTION IN BASIC BUSINESS SUBJECTS 3 sem. hrs.
 The contribution which basic business subjects can make to the educational program of the secondary school. Currently accepted methods and techniques of teaching such basic business subjects as General Business, Business Law, and Elementary Economics; teaching aids to effective instruction.

90.553 IMPROVEMENT OF INSTRUCTION IN ACCOUNTING AND BUSINESS MATHEMATICS 3 sem. hrs.
 Recent developments in methods of teaching Bookkeeping and Business Arithmetic and a critical analysis of objectives serve as a basis for increasing the competence of the teacher of these subjects. Consideration is given to teaching aids to improve the effectiveness of the classroom instructor.

90.561 FOUNDATIONS OF BUSINESS EDUCATION 3 sem. hrs.
 A study of the historical beginnings and present status of business education. The course serves as a basis for developing and understanding of the objectives and the philosophies underlying present-day vocational programs in the public school. Students are afforded the opportunity to become more deeply acquainted with current research in business education and up-to-date contribution of professional organizations.

90.562 CURRENT PROBLEMS IN BUSINESS EDUCATION 3 sem. hrs.
 The major problem areas in business education as revealed by the experience of students are studied with a view toward improving the competence of classroom teachers in coping with their responsibilities in the schools. The course is designed to foster a research attitude toward teaching problems. Teaching experience is strongly recommended as a prerequisite.

90.563 EVALUATION IN BUSINESS EDUCATION 3 sem. hrs.
 Objectives of measurement in business education; evaluative devices and their effective use.

90.564 ADMINISTRATION AND SUPERVISION OF BUSINESS EDUCATION 3 sem. hrs.
 A study of principles and techniques associated with educational administration serve as the basis for a consideration of administrative and supervisory responsibilities of the business education department chairperson. Topics discussed include departmental organization, curriculum development, teacher selection, supervision and improvement of classroom teaching, classroom planning, budgeting, maintenance of records, selection and purchase of equipment and supplies, federal and state funding, and current trends.

90.581 SEMINAR IN BUSINESS EDUCATION 3 sem. hrs.
 An investigation and evaluation of completed research in Business Education. The student submits written reports which are used as the basis for class discussions

ACCOUNTING
(Code 91)

91.521 ADVANCED COST ACCOUNTING**3 sem. hrs.**

Advanced Cost Accounting provides a thorough understanding of the basic concepts and practical procedures of reporting cost information to business management. Special emphasis is placed upon the use of budgetary control and budget analysis; the use of standard costs; the relevance of management's costs and profit responsibility reports; and the importance of capital expenditure planning and control.

Prerequisite: 91.421.

91.522 ADVANCED AUDITING THEORY**3 sem. hrs.**

A review and analysis of the complex ethical concepts of the accounting profession and their historical development. A survey of both old and new areas in the field of auditing, stressing the use of auditing data for managerial and other purposes. Careful analysis of the logical development of auditing principles and concepts.

Prerequisite: 91.422.

91.523 ADVANCED TAX ACCOUNTING**3 sem. hrs.**

Interpretation of federal and state partnership and corporate income tax laws. Case studies are employed to illustrate the proper preparation of returns, tax planning and research techniques. Social security taxes, gift taxes, and estate taxes.

Prerequisite: 91.423.

INFORMATION PROCESSING
(Code 92)

92.550 INFORMATION PROCESSING**3 sem. hrs.**

A comprehensive introduction and basic orientation to the use of information processing in the educational environment. The student will be required to investigate the impact of the computer and associated peripheral devices on the classroom. Effective use of available computer resources will be emphasized.

92.552 PROGRAMMING LANGUAGES**3 sem. hrs.**

Designed to familiarize educational personnel with the various programming languages available for educational training and administration. The student will be required to interface directly with a computer through terminals, explore language manuals and technical literature, and to define, write, test, and debug a program using several programming languages.

Prerequisite: 92.550 or consent of instructor.

92.554 MANAGEMENT INFORMATION SYSTEMS**3 sem. hrs.**

A study of information analysis and systems design from the user's point of view. The student will identify the basic concepts of the following: the systems point of view, the organization as a system, information flows, and the nature of management information systems. Data bases and data base management systems will be investigated from the manager's perspective.

Prerequisite: Graduate standing.

92.556 SYSTEMS DESIGN AND APPLICATION**3 sem. hrs.**

Assisting educational personnel to utilize the full capabilities of the computer in his/her own classroom constitutes the major objective of this course. Using the computer as a tool of research and calculation, simulation games, computer-assisted testing, computer-managed instruction, and computer-assisted instruction are explored through readings, discussions, demonstrations, and guest lecturers. This course also includes the basic concepts of systems analysis, feasibility, design and implementation.

Prerequisite: 92.552 or consent of instructor.

SECRETARIAL
(Code 94)

94.412 ADVANCED SHORTHAND WORKSHOP**3 sem. hrs.**

An introduction to different shorthand systems—machine, symbol, and non-symbol. Development of a degree of proficiency in the use of a different shorthand system through dictation and transcription. A review of the techniques and methods of teaching shorthand. Students are required to research the implementation of shorthand systems. This course is not applicable toward

*shorthand certification. *(undergraduate OR graduate credit)*

Prerequisites: 94.301 or 94.302.

FINANCE

(Code 96)

96.531 PROBLEMS IN CORPORATION FINANCE

3 sem. hrs.

Problems in organizing and financing operations of industrial corporations, public utilities, and railroads. Special attention is given to the kinds of corporate securities used to secure both short-term and long-term capital.

96.532 PROBLEMS IN PUBLIC FINANCE

3 sem. hrs.

Principles governing the budgeting and financing of federal, state, and local government operations; analysis of the effects of public expenditures, taxation, and debt management on the economy of the United States.

MARKETING

(Code 97)

97.541 RESEARCH IN MARKETING

3 sem. hrs.

An introduction to marketing research.

Prerequisite: 97.310 or consent of the instructor.

6.2 THE MASTER OF BUSINESS ADMINISTRATION DEGREE (MBA)

Philosophy and Objectives: The program for the degree, Master of Business Administration (MBA), is planned to reflect the curriculum standards of the American Assembly of Collegiate Schools of Business. It is oriented toward the decision-making responsibilities of management; consequently, it is broad-based and aims to develop perspective. It also provides a limited opportunity to elect courses in an area of specialization.

Admission to the Courses of the Program: Enrollment in the program is limited; therefore, admission to the courses is selective. The applicant must hold a baccalaureate degree from an accredited college or university. While no undergraduate major is prescribed, a minimum body of 30 credits in background courses in basic business subjects is required as outlined herein. The overall quality point average must have been 2.50 or higher; or if based on only the last two years of undergraduate work, must have been a 2.75 or higher. Requirements for admission to the Master of Business Administration program are based on a combination of undergraduate grade point average and score on the Graduate Management Admissions Test (GMAT). A score of 950 or more points based on the formula: 200 times the overall undergraduate grade point average plus the GMAT score; or at least 1,000 points based on the formula: 200 times the last two years of undergraduate grade point average plus the GMAT score.

Admissions criteria include the GMAT score, the undergraduate record, statements by two references, and job experience.

Admission to Candidacy for MBA Degree: Admission to the courses of the program does not imply admission to candidacy for the degree. The procedure for admission to candidacy is described in Section 2.22.

Program of Study: The total program for the MBA degree comprises two levels of courses. Level I consists of background courses or experiences that are prerequisite to Level II. Students whose undergraduate major was in Business Administration are likely to have had most, or perhaps all, of the courses of Level I; they may be exempted from courses which duplicate their undergraduate work. Level I must be completed before entering the Level II program.

The courses of Level I are: Principles of Accounting, Principles of Organization and Management, Principles of Marketing, Basic Business and Economic Statistics, Business Law, Business Finance, Principles of Economics (two semesters), and two semesters of Mathematics, including one semester of Calculus. In the undergraduate catalog of Bloomsburg State College these are numbered respectively: 91.221; 93.344; 97.310; 40.346; 90.331; 96.313; 40.211 and 212; and 53.123 plus one additional advanced mathematics course.

Level II consists of 36 semester hours of graduate credit, of which 30 are prescribed and six are elected.

The prescribed courses are:

91.524	MANAGERIAL ACCOUNTING	3 sem. hrs.
93.511	STATISTICAL (INFERENCE) ANALYSIS OR DESIGN	3 sem. hrs.
93.512	MANAGERIAL ECONOMICS	3 sem. hrs.
93.560	OPERATIONS MANAGEMENT	3 sem. hrs.
93.562	ORGANIZATION THEORY	3 sem. hrs.
93.563	OPERATIONS RESEARCH	3 sem. hrs.
93.564	ORGANIZATIONAL CHANGE	3 sem. hrs.
93.581	POLICIES	3 sem. hrs.
93.599	RESEARCH IN BUSINESS	3 sem. hrs.
96.535	FINANCIAL MANAGEMENT	3 sem. hrs.

97.551 MARKETING MANAGEMENT

Two courses must be elected in accounting, marketing, finance, or management. Elective courses may be chosen from:

91.501	FINANCIAL ACCOUNTING	3 sem. hrs.
91.502	ADVANCED FINANCIAL ACCOUNTING	3 sem. hrs.
91.503	GOVERNMENTAL FUND ACCOUNTING	3 sem. hrs.
92.554	MANAGEMENT INFORMATION SYSTEMS	3 sem. hrs.
93.561	OPERATIONS PLANNING AND CONTROL	3 sem. hrs.
96.550	SECURITY ANALYSIS & PORTFOLIO MANAGEMENT	3 sem. hrs.
96.565	SEMINAR IN FINANCE	3 sem. hrs.

or, with permission of the Dean, from the following senior level undergraduate courses (for course descriptions, see undergraduate catalog):

42.472	HISTORY OF LABOR IN THE UNITED STATES	3 sem. hrs.
96.454	ADVANCED FINANCIAL MANAGEMENT	3 sem. hrs.

ACCOUNTING
(Code 91)

91.501 FINANCIAL ACCOUNTING **3 sem. hrs.**

Emphasis on asset valuation, income determination, and financial accounting principles, with selected topics from the funds statement and analysis and interpretation of financial statements.

Prerequisite: 91.524.

91.502 ADVANCED FINANCIAL ACCOUNTING **3 sem. hrs.**

Advanced problems in consolidated statements, stockholder's equity partnership, fiduciary accounting, and selected topics dealing with government units and nonprofit service organizations. Selected reference to professional literature and uniform C.P.A. examination problems.

Prerequisite: 91.501.

91.503 GOVERNMENTAL FUND ACCOUNTING **3 sem. hrs.**

Accounting principles and practices of governments and nonprofit institutions. Comparisons between accounting principles and practices which apply to governments and nonprofit institutions and those which are generally accepted in business.

Prerequisite: 91.502.

91.524 MANAGERIAL ACCOUNTING

3 sem. hrs.

The major objective of this course is to show how accounting data can be used to help solve the problems of business management. Attention will also be given to the use of accounting data by investors and potential investors whenever possible.

MANAGEMENT
(Code 93)

93.511 STATISTICAL ANALYSIS

3 sem. hrs.

Statistical principles and procedures basic to research in business and interpretation of data.

93.512 MANAGERIAL ECONOMICS

3 sem. hrs.

Economic analysis of the firm and its environment. Determination of prices, output, and employment.

93.560 OPERATIONS MANAGEMENT

3 sem. hrs.

Analysis of manufacturing and service systems, and application of decision making to operational and policy problems.

93.561 OPERATIONS PLANNING AND CONTROL

3 sem. hrs.

Examination of research findings in operations management, with focus on the operation and control of the system.

Prerequisite: 93.560.

93.562 ORGANIZATION THEORY

3 sem. hrs.

Comparative examination of major approaches to the study of organizations. Theories and research findings applied to practical situations. Topics include: organization structure, systems of power and influence, organizational conflict and cooperation, individual motivation, group process, behavioral science research and its implications for management.

93.563 OPERATIONS RESEARCH IN BUSINESS

3 sem. hrs.

Construction and use of quantitative models in business decision making.

93.564 ORGANIZATIONAL CHANGE

3 sem. hrs.

Examination of research, theory, and practice in the dynamics of organizational change.

Prerequisite: 93.560.

93.581 POLICIES

3 sem. hrs.

Complex industrial situations are examined for the purpose of determining the strategy to insure long-run survival and growth in competitive markets. Emphasis is on problem-solving skills, implementation of optimal decisions, nature of strategic analysis including selected cases involving production, pricing, capital investments and their interaction with other factors.

Prerequisite: Must be taken in the last semester of the student's program.

93.599 RESEARCH IN BUSINESS

3 sem. hrs.

Opportunity in research under faculty guidance in an area of interest.

FINANCE
(Code 96)

96.454 ADVANCED FINANCIAL MANAGEMENT

3 sem. hrs.

The study of business financial problems and the development of advanced financial management practices as used in the decision-making role of the financial manager.

96.535 FINANCIAL MANAGEMENT

3 sem. hrs.

Extensive and in-depth study of management activities involved in the financial aspects of the business enterprise. Theoretical knowledge gained through exposure to financial management literature is applied to problem situations through the use of case studies and simulation techniques. Emphasis is placed on the development of perspective in the decision-making process, with the acquisition of tools to facilitate effective decision-making.

96.550 SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

3 sem. hrs.

An advanced treatment of aspects involved in developing a logical and systematic approach to analyzing and evaluating types of securities. Investment strategy and management of an investment portfolio. Theoretical aspects of security analysis and problems involved in analyzing and evaluating securities within the context of the type of industry issuing them.

96.565 SEMINAR IN FINANCE**3 sem. hrs.**

Seminar on unresolved problems in the field of finance, with investigations to include such areas as models for financial decision making, money and capital markets, and simulation problems.

MARKETING
(Code 97)**97.551 MARKETING MANAGEMENT****3 sem. hrs.**

Application of the managerial processes of analysis, organization, planning, and control of marketing activities: Marketing concepts, analysis of marketing opportunities, growth and competitive strategy, marketing information system, buyer behavior, and product development.



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1. Carver Hall	13. Northumberland Residence Hall	23. President's Residence
2. Schuylkill Residence Hall		24. Campus Maintenance Center
3. Heating Plant	14. Benjamin Franklin Hall	25. Human Services Center (Proposed)
4. Scranton Commons	15. Navy Hall	26. Old Science Hall
5. Kehr College Union	16. Columbia Residence Hall	27. Waller Administration Building
6. Lycoming Residence Hall	17. Haas Center for the Arts	28. Pergola
7. Elwell Residence Hall	18. Bakeless Center for the Humanities	29. Multi-Level Parking
8. College Store	19. Andruss Library	30. Softball Field
9. Luzerne Residence Hall	20. Hartline Science Center	31. Tennis Courts
10. Montour Residence Hall	21. Sutliff Hall	32. Practice Field
11. Maintenance Building	22. Centennial Gymnasium	33. Department of Nursing
12. Laundry		

